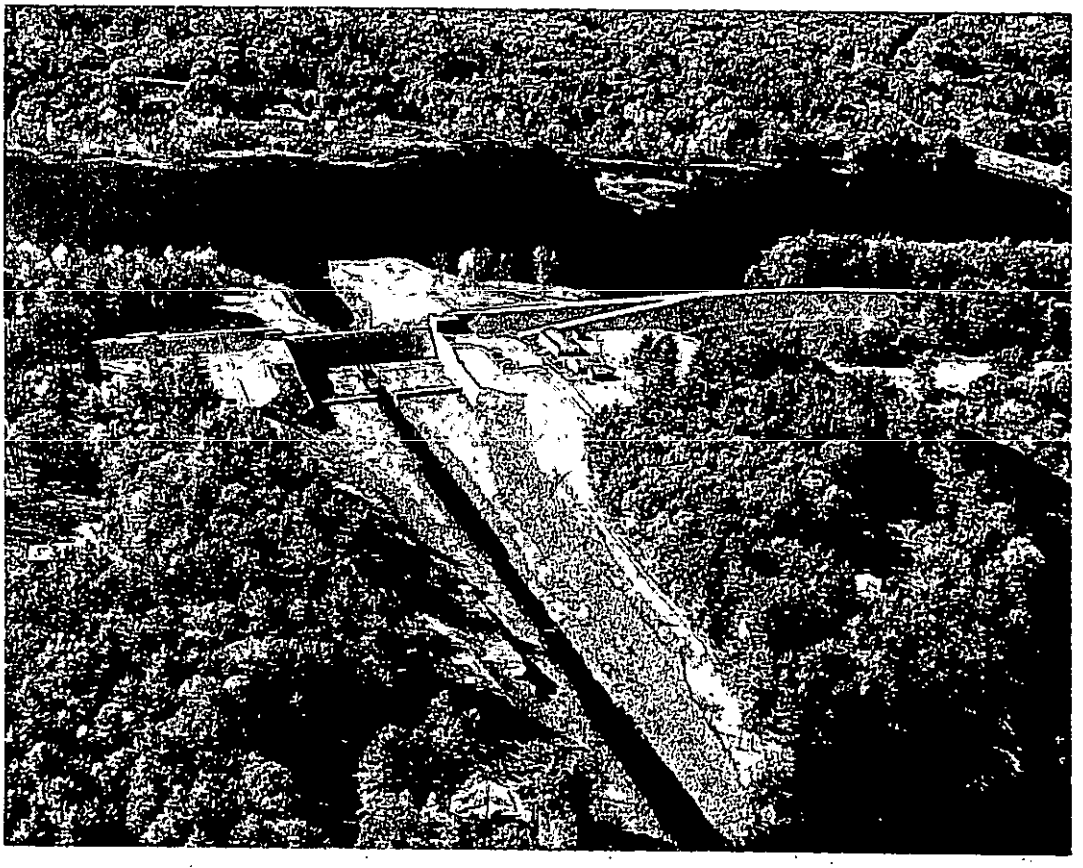
Spill Prevention, Control, and Countermeasure Plan
&
Spill Contingency Plan
for

Buffumville Lake



US Army Corps
of Engineers
New England Division

June 1995

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
&
SPILL CONTINGENCY PLAN

LOCATION:

Buffumville Lake
Oxford, Massachusetts

PREPARED BY:

Engineering Directorate
Water Control Division
Environmental Engineering
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APPROVED BY:

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LTC, EN
Deputy Commander

US Army Corps
of Engineers
New England Division

SPCCP/SCP CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER

CERTIFICATION: I hereby certify that I have examined Buffumville Lake, and being familiar with the provisions of 40 CFR Part 110, 112, 116, 117, 300, 302, and 355 attest that this SPCCP/SCP has been prepared in accordance with good engineering practices.

PROFESSIONAL ENGINEER: IAN T. OSGERBY PhD PE

SIGNATURE: Ian T. Osgerby DATE: 6/2/95

LICENSE NUMBER: 31806 STATE: MA

RECERTIFICATION FOR AMENDMENTS BY REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER:

SIGNATURE: _____ DATE: _____

LICENSE NUMBER: _____ STATE: _____

REVIEW DATES FOR SPCCP/SCP BY BUFFUMVILLE LAKE

June 1998 _____

June 2001 _____

June 2004 _____

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN
&
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SPILL PREVENTION, CONTROL, AND COUNTERMEASURES PLAN
&
SPILL CONTINGENCY PLAN

1. INTRODUCTION

This document is a Spill Prevention, Control, and Countermeasure Plan (SPCCP) and a Spill Contingency Plan (SCP) for the U.S. Army Corps of Engineers Buffumville Lake project. This plan provides for an efficient, coordinated, and effective response to oil and hazardous substance discharges and also addresses the prevention of such discharges. Included in the plan is a description and location of Buffumville Lake, responsibilities of New England Division and project personnel, potential spill hazards at Buffumville Lake, and procedures to prevent and control spills at the project. Training requirements for personnel at the project and recommendations on how the project can improve its prevention of and response to spills of oil and hazardous substances are listed in the plan.

The response by personnel at flood control projects to oil and hazardous substance incidents can mean the difference between a safely executed emergency operation and serious injury or death. Such incidents may occur on the civil works flood control project or close to the project so as to threaten it. Incidents may occur as a result of an accidental release of materials stored or used at Buffumville Lake, industrial and transportation accidents, or illegal disposal. Appropriate responses to incidents require identifying the hazardous substances, implementing preventative measures, planning for the emergency, and training in execution of the plan.

2. DEFINITIONS

Definitions of terms and acronyms used in this plan are listed in the Glossary in Appendix P.

3. PURPOSE

This Spill Prevention, Control, and Countermeasure Plan (SPCCP) and Spill Contingency Plan (SCP) follows U.S. Environmental Protection Agency (EPA) regulations under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Clean Water Act (CWA). The appropriate regulations are 40 CFR 110, 112, 116, 117, 300, 302, and 355.

The SPCCP/SCP serves as project contingency and action plans for response to discharges and releases of oil and

hazardous substances at Buffumville Lake. Policies, responsibilities, and procedures for the prevention and control of spills of oil and hazardous substances are prescribed. The plan is also intended to limit the risk of discharges of oil and hazardous substances into the environment.

4. POLICY

a. It is the policy of the U.S. Army Corps of Engineers, New England Division (NED), under ER 500-1-1, to prevent spills of petroleum fluids, chemicals, and hazardous substances, including extremely hazardous substances, that occur at Corps civil works projects, and to provide for a prompt, coordinated response to contain and clean up spills that might occur.

b. Unpermitted willful discharges from Corps-operated facilities, activities, or vessels are prohibited.

c. In the event of a spill emergency, the following protection priorities are hereby established as a guideline for spill responders:

- Human life and health
- Environment
- Property and structures

d. Project personnel will only respond to spills when it is reasonably safe to do so, and to the level that they are adequately trained and equipped.

e. Project personnel will not respond at a level higher than the "First Responder, Operations Level" (as defined in 29 CFR 1910.120(q)(6)(ii), Appendix I), unless authorized by the Division Commander, and appropriately trained to do so.

f. Project personnel will not respond to non-Corps spills off project lands, except as provided in paragraph 11a of this plan.

5. ASSUMPTIONS

a. This plan is in effect and implemented continuously.

b. The preliminary Oil and Hazardous Substance Incidents Contingency Plan for Buffumville Lake, prepared by project personnel, has been incorporated into this document to

eliminate duplication of effort, and to satisfy the contingency plan requirement.

c. Project personnel routinely take steps to develop and maintain secondary containment for the oil and hazardous substances at Buffumville Lake. Personnel follow SPCCP/SCP guidelines when dealing with oil or hazardous chemical spills at Buffumville Lake.

d. Project personnel shall use rapid communication, as defined in paragraph 11e of this plan, to inform responsible officials in order to obtain a fast, appropriate response.

e. Containers are assumed to be full unless identified as empty by label or context.

f. The project manager is responsible for site spill prevention at Buffumville Lake.

6. PROJECT DESCRIPTION AND LOCATION

Buffumville Lake is located in the south-central part of Massachusetts, approximately 45 miles southwest of Boston (see figure 1 for location map). The Buffumville site is located on the Little River, about 1.3 miles above its junction with the French River, in the town of Charlton, MA, about 5 miles north of Webster, MA, and about 15 miles north of Putnam, Connecticut. This was constructed by the Corps as a dual-purpose project, and placed it in operation in 1958. Flood control and recreational activities are provided by the dam and impounded lake. The project is 1 of 6 flood control reservoirs in the Thames River Basin constructed by the Corps of Engineers. A Basin Map is shown in figure 2.

At the dam site, the Little River is confined in a narrow, steepsided trough excavated through an arcuate, terrace-like ridge, which extends completely across the valley. Both upstream and downstream from the dam site, the narrow trough flares out into wide, flat, open basins where the river is ponded by an artificial dam, located approximately one-half mile downstream. Bedrock, a quartz schist, is exposed only in the foundation area of the dam, on the left side of the river in a small outcrop at river level, and another approximately 10 feet higher on the steep hillside.

The Buffumville Lake project consists of a rolled earthfill embankment, with a concrete spillway, outlet works, and storage capacity for recreation and flood control. The dam is 3,255 feet long and has a maximum height of 66 feet. Top width of the dam is 20 feet, and the slope of the

embankment, on both upstream and downstream faces, is 1V on 2H. The concrete spillway has a crest length of 220 feet; crest elevation is 524 feet NGVD (National Geodetic Vertical Datum of 1929), and is joined to the earth dam by concrete gravity walls at each end. The outlet works, located in the center of the spillway, consist of three 3 foot wide by 4 foot 6 inch high gated rectangular conduits, with inverts at elevation 481.5 feet NGVD. Flow through the outlets is controlled by three electronically operated slide gates. General layout of the dam is shown in figure 3.

When filled to spillway crest elevation, 524.0 feet NGVD, the reservoir has a total capacity of 12,700 acre-feet, equivalent to 9.0 inches of runoff from the 26.5-square mile drainage area. The reservoir length, at spillway crest, formed by this 530 acre pool is three miles. A recreation pool of 200 acres at an elevation of 492.5 feet NGVD is permanently maintained, and has a maximum depth of 11 feet. Buffumville Lake provides a variety of recreational opportunities, including scenic trails, boating facilities, a picnic shelter, and swimming beach. The reservoir offers warm water fishing for bass, pickerel, northern pike, and other species. A Reservoir Map is shown in figure 4.

7. RESPONSIBILITIES

a. Commander

(1) Exercise overall control of Division facilities, NED personnel, and contractor personnel managing or handling oil and hazardous substances.

(2) Support programs and budgets for personnel, materials, equipment, and training required for oil and hazardous substances spill prevention, control, and countermeasures.

(3) Review SPCCP/SCP to determine whether the plan meets criteria specified in applicable Federal and State regulations.

(4) Approve communication plans and policy leading to the release of information to the public in the event a spill should pose an imminent threat to public health and welfare, or the environment. The Chief, Public Affairs is the primary staff element responsible for coordinating and reviewing all Division public information materials.

(5) Authorize emergency spill responses to non-Corps spills off Corps property (refer to paragraph 11a of this plan for further information).

(6) Encourage operators of facilities, on land leased from the Corps, to coordinate with local emergency response authorities to obtain necessary support in the event of a spill (refer to paragraph 8b of this plan for further details).

b. Director of Operations

(1) Exercise overall control of Operations' facilities, NED personnel, including those of the contractor, that manage or handle oil and hazardous substances.

(2) Ensure that spill prevention and cleanups occur according to SPCCP/SCP guidelines.

(3) Ensure that all reportable quantity spills are reported in a timely manner.

(4) Support programs and budgets for personnel, materials, equipment, and training required for oil and hazardous substances spill prevention, control, and countermeasures.

c. Environmental Compliance Coordinator

(1) Review and approve SPCCP/SCP, revisions, and amendments.

(2) Brief the Commander and senior staff on oil and hazardous substance spills and releases, and submit followup reports to the Commander.

(3) Provide oversight of all programs and projects involving environmental compliance at Corps-owned or operated facilities or projects.

d. Chief, Environmental Engineering and Hydraulics Branch

(1) Prepare SPCCP/SCP and review plans for conformance and compliance with applicable Federal, State, and local regulations.

(2) Execute periodic technical reviews of SPCCP/SCP.

(3) Develop and provide training on prevention, control, and cleanup of spills at Buffumville Lake (refer to paragraph 13 and Appendix O of this plan for further information).

e. Project Manager, Buffumville Lake

(1) Formulate budget for personnel, materials, equipment, and training programs required for oil and hazardous substances spill prevention, control, and countermeasures.

(2) Provide a written description of each spill beyond secondary containment to the Director of Operations and Environmental Compliance Coordinator at NED. The description should include corrective action(s) taken and plans for preventing recurrences.

(3) Prepare and submit a followup report to the Division Commander of any response action taken by Corps personnel. The report must be submitted within four weeks of initial response.

(4) Manage and oversee spill prevention activities at Buffumville Lake.

(5) Maintain a copy of the SPCCP/SCP on file at the project.

(6) Ensure that all oil and hazardous substances at Buffumville Lake are handled carefully so the possibility of spills is avoided or minimized.

(7) Provide secondary containment to prevent release of petroleum liquids, oils, and hazardous substances to the environment (secondary containment includes basins, catchment areas, curbing, dikes, drip pans, relief vessels, vaults, and similar devices).

(8) Identify and address Buffumville's handling of oil or hazardous substances not included in the SPCCP/SCP.

(9) Develop and review amendments to the SPCCP/SCP. Amendments may include changes to structures, equipment, and operations within the facility area for handling oil and hazardous substances. Amendments may also include changes to oil or hazardous substance regulations.

(10) Perform periodic inspections of the facilities to verify compliance with this plan. This should include inspection of oil and hazardous substance handling and storage areas for the presence and readiness of structures, equipment, and materials that are used to prevent, control, and respond to spills. Documentation of such inspections shall be kept on file at Buffumville Lake for five years.

(11) Maintain spill equipment and material used for prevention and containment at the project.

f. Project Personnel

(1) Follow proper work procedures when handling oil and hazardous substances.

(2) Immediately report any spill occurring on or adjacent to the facility, including spills within or beyond secondary containment. When reporting spills project personnel will follow the instructions provided in paragraph 11 of this plan.

g. Chief, Public Affairs

(1) Release and/or conduct all news releases, photographs, and other media briefings and informational material pertaining to a spill.

(2) Coordinate, release, or conduct (as appropriate) all official public statements, briefings, speeches, responses to media queries, exhibits, and audio-visual materials concerning reportable releases/spills.

(3) Act as the Division public information control point during mobilization and emergency activities.

h. Safety and Occupational Health Manager

(1) Assist the Division Commander in his determination of the appropriate level of emergency spill response to be provided at Corps-operated facilities.

(2) Provide support to the project team to ensure they maximize the use of qualified non-Corps spill response sources in order to minimize the use of, and risk to, in-house personnel.

(3) Manage the Medical Surveilllance Program to include, as appropriate, personnel assigned as first responders.

8. POTENTIAL SPILL HAZARDS

a. Routine Activities. Typical activities at buildings and grounds at Buffumville Lake include the maintenance of flood control facilities and vehicles, mowing of embankments and grounds, debris and sediment removal from the reservoir, and repair and servicing of mechanical equipment and structures. These activities require the handling and

storage of oil, other petroleum products, and chemical products; a leak or spill of these products could occur when activities are being performed.

These activities are normally contracted out to commercial companies (contractors) who perform the work. Any waste oil generated (e.g., from the use of chain saws, engines, etc.) during their working timeframe is disposed of by the contractor. Response to spills as a result of these activities is the contractor's responsibility. In the event a contractor causes a spill, and is unwilling or unable to respond, the Corps will provide a response to contain and clean up the spill. This response will follow the guidelines developed in paragraph 11 of this plan. In the case of a contractor's noncompliance with safety and environmental standards, Corps officials have the option of stopping his work and/or seeking compensation from him for expenses incurred in fulfilling spill response obligations.

If a situation arises where waste oil is generated by Buffumville Lake personnel (e.g., emergency oil change on a Corps owned vehicle or piece of equipment), the waste oil is now taken to the Oxford Highway Department for disposal.

Buffumville Lake is registered as a small quantity generator of waste oil with the Environmental Protection Agency (EPA). This registration, as a small quantity generator, addresses the issue of generating, handling, and disposing waste oil by Buffumville Lake personnel. The project's EPA small quantity generator ID number is MA960012567. The recommended procedure for project personnel to follow when generating waste oil is outlined in Appendix O of this plan.

b. Leased Areas. The following paragraph provides guidance for land that is leased out (outgranted). While several tracts of land are leased out, they do not contain any oil or hazardous substances.

Response to spills from lessee facilities and activities on Corps lands are the responsibility of the "lessee," also referred to as the "lease area operator."

(1) Where leased areas are mandated by Federal or State regulations to have and maintain a spill plan, the lessee will comply with spill planning requirements, and be clearly able to provide an adequate response in the event of a spill.

(2) Where leased areas are not required by Federal or State regulations to have a spill plan, the lease area

operator will coordinate with local emergency response authorities to obtain necessary support in the event of a spill.

(3) In the event that any leased area facility appears to present a high risk of an oil or hazardous substance spill, and is unable to provide an adequate response, the Division Commander shall take prompt action to reduce the risk. In the case of a very high spill risk without provision for adequate response, the Division Commander will close the leased area until it is brought into compliance. The determination of high or very high risks shall be left to the Division Commander's professional judgement. The leased area facility need not be required by Federal or State regulations to have a spill plan for action to be taken regarding high or very high risk of a spill.

c. Oil Tanks. Petroleum product storage tanks are listed in Appendix B, "Oil Storage Tank Inventory," which includes tank number, location, capacity, installation date, type, material of construction, fuel type stored in tank, purpose of fuel or usage, and whether the tank has secondary containment, leak detection, or cathodic protection. Locations of these storage tanks are shown on figure 5 in Appendix A. A description of the physical setup and operation conducted at each storage tank is listed below. The description includes potential spill situations, secondary containment provided, and description of where the spill would flow. Note that piping to and from the oil tanks is not addressed under potential spill situations.

Tank	Description
BV1	-- 275 gallon above ground storage tank. -- Located in the basement of the Buffumville Lake Project Office. -- Single-wall steel construction. -- Contains #2 fuel oil. -- No secondary containment. -- Leak from the tank would collect on the basement floor. -- Basement floor is not sealed; therefore, the basement does not serve as secondary containment. -- Spill while filling BV1 would enter the soil behind the office. -- A catastrophic spill while filling, such as an oil tanker truck rupturing and spilling its entire contents, would cause oil to flow into the storm drain, which empties into the downstream side of the spillway.

BV2
-- 275 gallon above ground storage tank.
-- Located in upper basement of the control house next to tank BV3.
-- Single-wall steel construction.
-- Contains #2 fuel oil.
-- Concrete dike for secondary containment.
-- Leak from BV2 (and BV3) would be contained within the concrete dike.
-- Spill while filling BV2 would collect on the pavement in front of the control house.
-- A catastrophic spill while filling, such as an oil tanker truck rupturing and spilling its entire contents, would cause oil to flow into the storm drain, which empties into the downstream side of the spillway.

BV3
-- 275 gallon above ground storage tank.
-- Located in the upper basement of the control house next to tank BV2.
-- Single-wall steel construction.
-- Contains #2 fuel oil.
-- Concrete dike for secondary containment.
-- Leak from BV3 (and BV2) would be contained within the concrete dike.
-- Spill while filling BV3 would collect on the pavement in front of the control house.
-- A catastrophic spill while filling, such as an oil tanker truck rupturing and spilling its entire contents, would cause oil to flow into the storm drain, which empties into the downstream side of the spillway.

BV4
-- 275 gallon above ground storage tank.
-- Located in the utility building.
-- Double-wall steel construction with a vacuum between the two walls of the tank.
-- Contains #2 fuel oil.
-- Outer wall of tank acts as secondary containment.
-- Leak from BV4 would collect on the floor of the utility building.
-- Spill while filling BV4 would enter the soil behind the utility building.
-- A catastrophic spill while filling, such as an oil tanker truck rupturing and spilling its entire contents, would cause oil to flow into the storm drain which empties into the downstream side of the spillway.

BV5 -- 10 gallon aboveground storage tank.
-- Located in the operating floor of the control house next to the generator.
-- Single-wall construction.
-- Contains fuel oil received from tanks BV2 and BV3.
-- Self-contained dike for secondary containment.
-- Leak from BV5 would be captured by the self-contained dike.

d. Paint Locker. Oil, petroleum products, and chemical products are stored in a paint locker in the utility building. This locker is vented by gravity through a chimney leading to the utility building roof. The paint locker has a 4-inch high concrete berm at its entrance that acts as secondary containment. The locker's secondary containment has a capacity of 200 gallons. A 45-gallon flammable storage cabinet is located in the paint locker. Less than 25 gallons of gasoline and diesel fuel are kept in this cabinet. The cabinet has no open airways to the paint locker and, therefore, has no ventilation. A copy of Buffumville's current chemical inventory stored in the paint locker is kept in the project office. In Appendix C of this plan, space is provided for the project manager to place a copy of the chemical product inventory. Material Safety Data Sheets (MSDS) for materials on site are kept in a file cabinet in the utility building. If an MSDS for a product is not available, one for a similar product is now used.

Items on the current inventory are not considered hazardous as defined under 40 CFR 355.20. This CFR excludes a chemical from being classified as being hazardous if it is "used for personal, family, or household purposes, or is present in the same form and concentration as a product packaged for distribution and use by the general public." All chemicals at Buffumville Lake can be defined as such. Under 40 CFR 302, some products on the Buffumville inventory are considered to be made up of hazardous substances; however, these products are not considered hazardous because the amount of hazardous substance(s) in the product is under the reportable quantity (RQ).

Under Massachusetts Regulations that govern hazardous materials (310 CMR 40), the only petroleum products at Buffumville Lake that are at or over the RQ are oils, gasoline, and diesel fuel. A list of these products is shown in Appendix D1. Some products listed are under the RQ, but in a worst case scenario where all petroleum products were to spill, the total amount would be above the RQ. Reportable quantities for hazardous substances determined by the Massachusetts Department of Environmental Protection are

listed in Appendix D2. Space is provided in Appendix D3 to list hazardous substances and their RQs, as defined and tabulated under 40 CFR 302.

In a worst case scenario where all petroleum products (oil, gasoline, and diesel fuel) were to spill, the paint locker's secondary containment is designed to contain the total quantity spilled. However, since the wall/floor joints are not sealed, there is a potential for spills beyond secondary containment from the paint locker. Therefore, this is not an approved secondary containment, as defined under 29 CFR 1910.106(d)(4). Also, the ventilation system in the paint locker is not an approved ventilation system, as defined under NFPA 30, Chapter 4-4.1.6 and under EM 385-1-1, Section 09.B.24. The ventilation system does not provide an approved component of a contingency plan in case of a spill.

e. Additional Potential Spill Hazards

(1) A leak from a natural gas pipeline buried beneath sediments in the northern section of Buffumville Lake (see figure 4 in Appendix A for location). This pipeline belongs to the Tennessee Gas Company, which maintains a 24-hour emergency telephone number in the event of a leak (telephone number is 800-231-2800).

(2) A leak or spill from an oil pipeline buried underneath the southern section of the lake (see figure 4 in Appendix A for location). This pipeline belongs to the Mobil Oil Company, which maintains a 24-hour emergency telephone number in the event of a leak (telephone number is 214-658-2370).

(3) A hazardous materials leak or spill from vehicles transporting chemical materials across and adjacent to project boundaries. These materials could include heating oil, sewage, hazardous waste, and gasoline.

(4) An oil or gasoline leak or spill from waterborne vehicles operating on or upstream of Buffumville Lake.

(5) An oil or gasoline leak or spill from vehicles using roads that cross or run adjacent to project boundaries. These roads are A. F. Putnam, Davis, Gale, Oxford, and Potter Village Roads, and Shore Drive.

(6) A hazardous materials spill that occurs upstream of Buffumville Lake and migrates downstream into the lake (see figure 2 in Appendix A for areas that are upstream and downstream of Buffumville Lake). Areas downstream will be affected by a spill if it passes through the dam and migrates

downstream. If this should happen, it is recommended that the Chairman of the Hazardous Waste Committee in Charlton, MA, be contacted at 508-248-5983. It is also recommended that the Oxford Police/Fire Dispatch be contacted at 508-987-0156.

9. EMERGENCY SPILL RESPONSE EQUIPMENT AND MATERIALS

Equipment and materials used for spill response at Buffumville Lake are listed in Appendix E1. These materials are stored in the cabinet labelled "Hazardous Materials Spill Kit" in the Buffumville Lake Utility Building The amount of spill response equipment and materials purchased and stored at the project should be no more than what would be required for a response to a worst case scenario of a Corps spill. All equipment and materials stored at the project will be regularly inspected, properly maintained, and regularly serviced by a qualified technician. A checklist for emergency spill response equipment and materials is located in Appendix E2. Implementation of a training program on use of spill response equipment and materials should be carried out; this is discussed in paragraph 13, TRAINING.

10. HISTORIC OIL AND HAZARDOUS SUBSTANCE INCIDENTS

After a review of the spill incident files at Buffumville Lake and the Massachusetts Department of Environmental Protection (MA DEP), Central Region Office in Worcester, MA, the following statements are presented:

a. There are no known occurrences of oil or hazardous substance spills on Corps property at Buffumville Lake prior to 2 February 1992.

b. On 2 February 1992, an unknown quantity of gasoline, oil, and hydraulic fluid entered Buffumville Reservoir, resulting from a vehicular accident that occurred on the dam embankment. M&E Zecco responded, cleaned up the spill, and disposed of all absorbent materials.

c. On 15 August 1993, a small gasoline spill (less than five gallons) occurred at the Buffumville Park boat ramp. M&E Zecco was contacted, and cleaned up the spill, which included removal of absorbent material.

Copies of Massachusetts Department of Environmental Protection Oil and Hazardous Material Incident Reports, pertaining to Buffumville Lake, are displayed in Appendix M.

11. SPILL PREVENTION AND CONTROL PROCEDURES

The primary concerns in spill situations are to protect personnel and the environment, and notify appropriate authorities. In most cases, the initial observer should know what type of material has been spilled, and safety precautions that are required. The initial observer is any individual who discovers a spill. If there is any doubt about the material spilled, the initial observer should remove himself from danger, collect as much information about the spill as possible, and report the problem to appropriate authorities, using the Chain of Responsibility in Appendix F. Information an initial observer should try to obtain is listed in Appendix G, Spill Discovery Checklist. This information should be obtained as quickly as possible, but only when the observer is safe from danger.

a. Response to Spills Outside Project Boundaries

(1) If a spill occurs outside the Buffumville project's boundaries and does not directly affect Buffumville Lake, but threatens to do so, project personnel will safely monitor the situation, and immediately report information as it becomes available to the agencies listed in the Chain of Responsibility.

(2) If a spill should migrate onto the Buffumville site, project personnel will try to contain it if they know the type of material spilled and are capable of containing the spill (i.e., proper equipment, materials, qualified personnel, and waste storage/disposal). The project manager will make the determination if personnel at the project are capable of responding to the spill. For spills beyond the project personnel's capacity to respond, an emergency spill contractor will be contacted by the project manager. As with all spills, the Chain of Responsibility List will be implemented (see Appendix H for a list of emergency spill response agencies).

If the spill threatens to pass downstream of Buffumville Lake, project personnel will attempt to contain it by manipulating the slide gates. If the gates are manipulated in any way, the Reservoir Control Center (RCC) at NED should be contacted at 617-647-8630 after the Chain of Responsibility in Appendix F has been followed.

(3) Project personnel may respond to spills off Corps property that pose an immediate threat to the project or Buffumville Lake personnel, are beyond the capability of available emergency spill responders, and if the project personnel are adequately trained and equipped to respond to

such a spill. The Division Commander shall make such a determination and authorize an emergency spill response. A followup report regarding such a response must be prepared and submitted by the project manager to the Division Commander within four weeks of the initial response date.

b. Response to Spills Within Project Boundaries.

(1) Any individual who discovers a spill, referred to hereafter as the initial observer, should protect himself from harm. This can be done by keeping away from the incident scene, and avoiding contact with the spilled material. A spill should be approached from upwind, if possible. Inhalation of fumes, smoke, or vapors from any spill should be avoided even if the gases or vapors are odorless and appear harmless. All equipment or materials that could cause the spill to ignite should be deactivated (e.g., cigarettes, matches, engines, etc.).

(2) After all persons are protected from harm, an attempt should be made, by the initial observer, to gather as much information about the spill as possible (see Appendix G for the Spill Discovery Checklist).

(3) Once the spilled material has been identified, the initial observer should attempt to stop its flow, and use professional judgement in stopping it. Flow may be stopped by closing valves, turning ruptured containers, temporarily plugging leaks, repacking leaking containers, or by using emergency spill response equipment and materials. A list of such equipment and materials is shown in Appendix E1.

(4) If the flow of the spilled material has stopped, an attempt should be made to contain the material by individuals who have been properly trained in handling spilled materials, to prevent further contamination of the environment. Spill containment can be accomplished by covering nearby drains with absorbent mats, and placing absorbent materials in and around the spill. The site should be contained and fenced off from the public to protect them from harm.

(5) Buffumville Lake personnel clean up minor spills on site only if conditions of the spill (i.e., substance, quantity, location, and timing) are within the project's capability to respond (i.e., proper equipment, materials, qualified personnel, and waste storage/disposal). The project manager shall use professional judgement in making the determination on whether his personnel are capable of responding to a spill.

(6) If a spill is beyond the project personnel's capability to control, an emergency spill contractor will be contacted by the project manager (see Appendix H for a partial list of emergency spill contractors approved by the Massachusetts DEP).

c. Spill Response Level for Buffumville Lake Personnel. Buffumville Lake personnel are to be trained and equipped at the "First Responder, Operations Level" designated in 29 CFR Part 1910.120(q)(6)(ii) (Appendix I). The Division Commander will assure they are not responding at levels beyond their training or his authorization.

d. Notification of Spill. When notifying appropriate personnel or agencies of a spill, certain information must be determined to the greatest extent practicable (see Appendix G, Spill Discovery Checklist). The Chain of Responsibility, listed in Appendix F, must be followed when notifying personnel or agencies of a spill. There are certain time requirements to meet when reporting spills to the MA DEP. These requirements are listed in Appendix J. A facsimile of the Spill Discovery Checklist should also be forwarded to the personnel or agencies that are notified. When the next person or agency in line on the Chain of Responsibility is not available, contact the next in sequence.

(1) All spills within secondary containment of any volume must be reported to the project manager by the initial observer.

(2) All spills beyond secondary containment of any volume must be reported by the initial observer to the project manager, who then will contact the National Response Center.

(3) All spills, leaks, or releases which enter, or have the potential of entering, any water or soil on or adjacent to Buffumville Lake property must be reported to the project manager, who will then immediately contact the National Response Center. Appropriate personnel and agencies to be contacted are listed below:

Project Manager.....(work) 508-248-5697

National Response Center.....800-424-8802

U.S. EPA Region I Hotline.....617-223-7265

Massachusetts Department of Environmental Protection (DEP) Spill Response.....508-792-7653

Director of Operations, NED.....617-647-8321

Environmental Compliance Coordinator, NED.....617-647-8168

For most incidents, the National Response Center will refer the caller to the U.S. EPA Region I Hotline. EPA in turn will likely refer the caller to the responsible State agency (Massachusetts DEP). Regardless of what agency ultimately reviews the spill, it is critical that the National Response Center be the first contacted, regardless of the size of the incident.

If a spill threatens public health or safety, the local authorities (e.g., Police and Fire Departments) must be notified. For minor spills that have no impact on public health or safety, the project manager shall use his professional judgement to decide if local authorities should be contacted. Also, they may be contacted as a courtesy, even when the spill does not directly concern them.

Appendix H is a list of Federal and State agencies to contact in the event of a spill. A partial list of emergency spill contractors, approved by the Massachusetts Department of Environmental Protection, is also provided.

(4) The following steps provide a guide for spill notification procedure.

(a) The **initial observer** informs the **project manager** immediately upon discovery. Information on the Spill Discovery Checklist in Appendix G is gathered to the greatest extent possible. There shall be no delay in reporting a spill by gathering noncritical information. If the **project manager** is **not** available, then the **initial observer** shall contact the next person or agency in sequence on the Chain of Responsibility shown in Appendix F. Time requirements for the notification of spills to the MA DEP are shown in a table in Appendix J.

(b) The **project manager** determines the nature and severity of the spill and, from that determination, selects other persons and agencies for notification.

(c) For spills that enter or have the potential to enter any water or soil, on or adjacent to Buffumville Lake property, including spills beyond secondary containment, the **project manager** contacts the National Response Center.

e. Rapid Communication

(1) The telephone system is the primary means for exchange of spill information.

(2) The Corps radio network, operated by NED, is the secondary means for communicating spill information.

f. Request for Assistance. If project personnel have implemented a cleanup response, and anticipate lacking some or all the needed resources, the **project manager** will estimate the resources necessary to respond to the spill. He will then call an emergency spill contractor to assist in the response to the spill. A call should then be placed by the **project manager** to the Director of Operations at NED to inform him of the situation (see Appendix H for a partial list of emergency spill contractors approved by the Massachusetts DEP).

g. Release of Information. Officials assigned to release information about a spill should ensure public safety, prevent or reduce widespread alarm, and ensure public understanding of the extent and nature of the hazard resulting from the spill. The public is entitled to all unclassified information concerning a spill. The information should be furnished in a manner that assures accuracy, and reflects consideration of public welfare, national interest, and function of Command.

The Division Commander has the authority to approve the release of information in the event a spill poses an imminent threat to public health and welfare, or the environment. Information proposed for release will be coordinated with the Chief, Public Affairs Office before release. For spills that are contained within the project boundaries and pose no threat to the public health, release of information will be made at the discretion of the Division Commander. However, prompt release of factual information is encouraged.

12. SECURITY

The level of security at Buffumville Lake is sufficient to deter unwanted access to oil and hazardous substances on site. This paragraph describes the present security measures at Buffumville Lake; no changes are recommended.

a. Vehicle access to the project site and dam is provided through Gale Road. A locking gate is provided at the entrance from the road to the project. The gate is kept open 24 hours a day, all year round, to allow police patrol of the area. There is another access road to the dam from

Oxford Road, which rides the crest of the dam and is secured by a locked gate. A ramp near the control house provides access to the crest of the dam. This ramp also has a locking gate and is kept closed, except for maintenance purposes. An access road, secured by a locked gate, to the southern end of the spillway is provided from Gale Road.

b. Lights are installed on all buildings, and on a power pole located between the office and utility building. All lights are activated manually by switch except for the light on the garage, which has a photoelectric cell that turns the light on automatically at dusk, and off at dawn. The lights on the control house are not normally in use.

c. All buildings at the project site have an alarm system.

d. Duty hours, from the third Saturday in May to the second Saturday in October, are normally 0700 to 2000 during the week and weekends. From the second Saturday in October to the third Saturday in May, normal duty hours are 0700 to 1730 during the week. The project office is not staffed on weekends during this period.

e. Some graffiti has been sprayed on the spillway in the past, but there are no major problems with vandalism at or near the dam site.

13. TRAINING

The project manager is responsible for ensuring that the following training and information are provided to project personnel.

a. A briefing will be conducted for all project personnel on the SPCCP/SCP once a year, or when implementing changes to the plan. The briefing should include spill response and control procedures, spill history, malfunctioning components, and recently developed precautionary measures. The information discussed in the briefing should enable all project personnel to have a thorough understanding of the SPCCP/SCP.

b. Training drills on spill prevention, containment, retrieval methods, and inspection procedures will be conducted periodically.

c. Proper instruction in the operation and maintenance of equipment, to prevent the discharge of oil and hazardous substances, will be given.

d. Personnel will be informed of the following policies:

(1) Containment, seams, rivets, nozzle connections, valves, pumps, and piping directly connected to above ground storage tanks must be visually examined and recorded at least quarterly for any leakage. All leaks should be promptly corrected. A log sheet shall be maintained to indicate that the inspection was carried out (see Appendix K for a sample of above ground oil storage tank inspection log sheet). The records should be maintained at the project for five years.

(2) The liquid level in an oil storage tank should be gauged, and the measurement recorded in writing before each filling of the storage tank.

e. Proper instruction in all applicable Federal, State, and local pollution control laws, rules, and regulations. Appropriate regulations are found in Appendix Q.

Training records will be kept for all personnel, documenting the above required training has been completed. Records for all former employees should be maintained for at least 3 years. A sample training log sheet is listed in Appendix L. Implementation of a formal training program is discussed in the next paragraph.

14. PROJECT INSPECTION

An inspection was carried out by the Environmental Engineering and Hydraulics Branch on 10 January, 1995. The inspection determined the spill response and control measures at the project and served as the basis of the spill contingency plan.

The findings of the inspection have been recorded in paragraphs 8c and 8d. Recommendations based on these findings are presented in Appendix O.

15. SPCCP/SCP REVIEW AND UPDATES

a. The SPCCP/SCP shall be reviewed by Environmental Engineering and Hydraulics Branch at least every three years for possible changes in the facility, availability of more effective and commercial prevention and control technologies, and changes in regulations and policies.

b. The SPCCP/SCP will be updated whenever there is a change in facility design, construction, operation, or maintenance, affecting the facility's potential for the discharge of oil or hazardous substances into waters of the United States, or adjoining shorelines. Such changes shall

be documented in the SPCCP/SCP as soon as possible, but no later than three months after occurrence. Any change or amendment to this SPCCP/SCP should be attached in Appendix R. Amendments must be certified by a registered professional engineer.

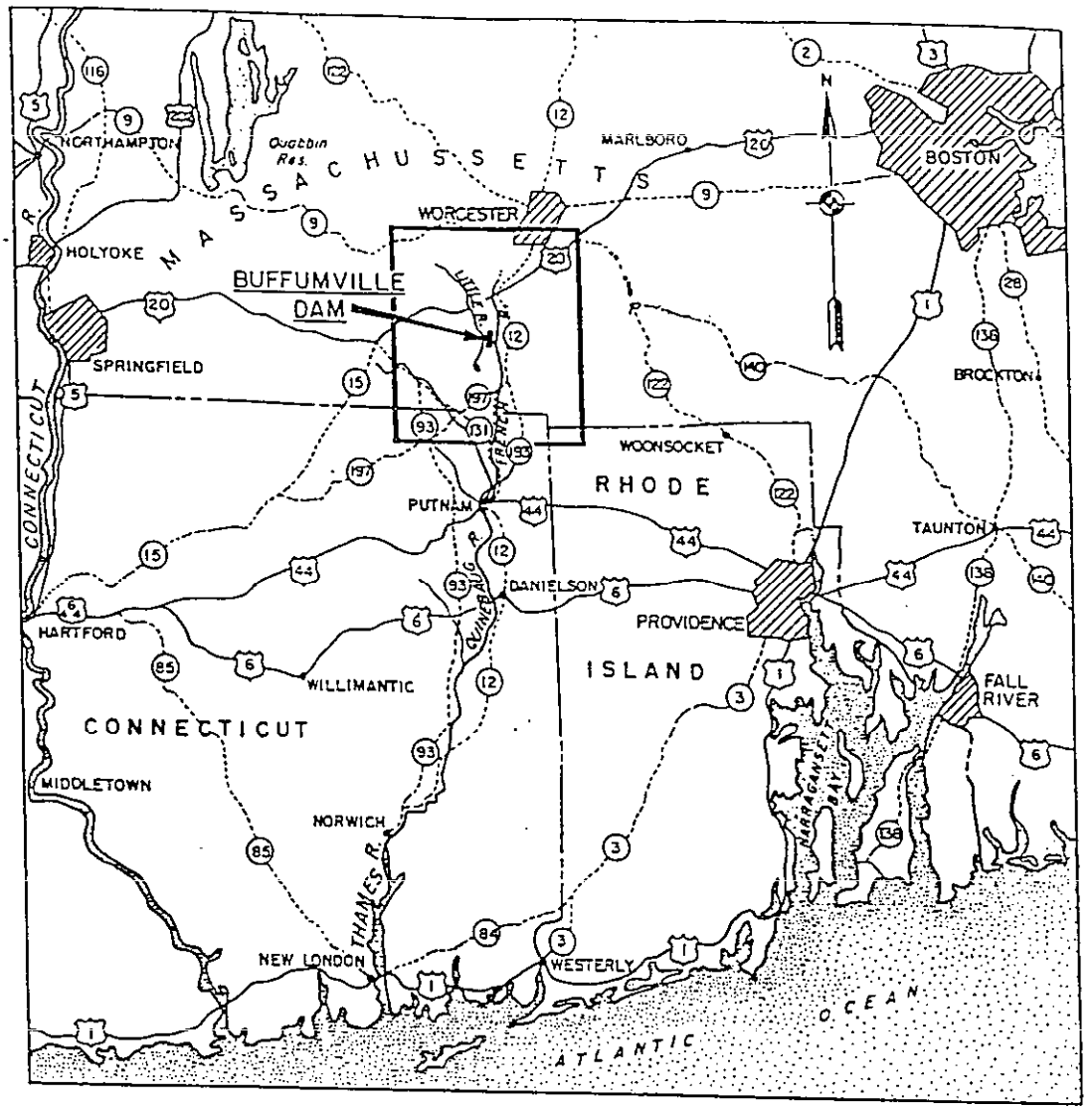
c. One complete, current SPCCP/SCP copy, the record copy, will be maintained in custody of the project manager. Copies will also be kept by NED's Operations Technical Support and Water Control Divisions.

d. A copy of the Chain of Responsibility and Emergency Spill Response Agency and Organization List will be kept current. It is the project manager's responsibility to keep these lists current. Copies of each list, and the Emergency Response Checklist, shall be displayed in the office area, utility building, and control house. Current copies shall be included in this document.

Appendix A

Figures

BUFFUMVILLE LAKE LOCATION MAP



LOCATION MAP

SCALE IN MILES

8 0 8 16 MI.

LEGEND

- U. S. Highways
- State Highways
- State Lines
- Rivers

FIGURE 1

THAMES RIVER BASIN MAP

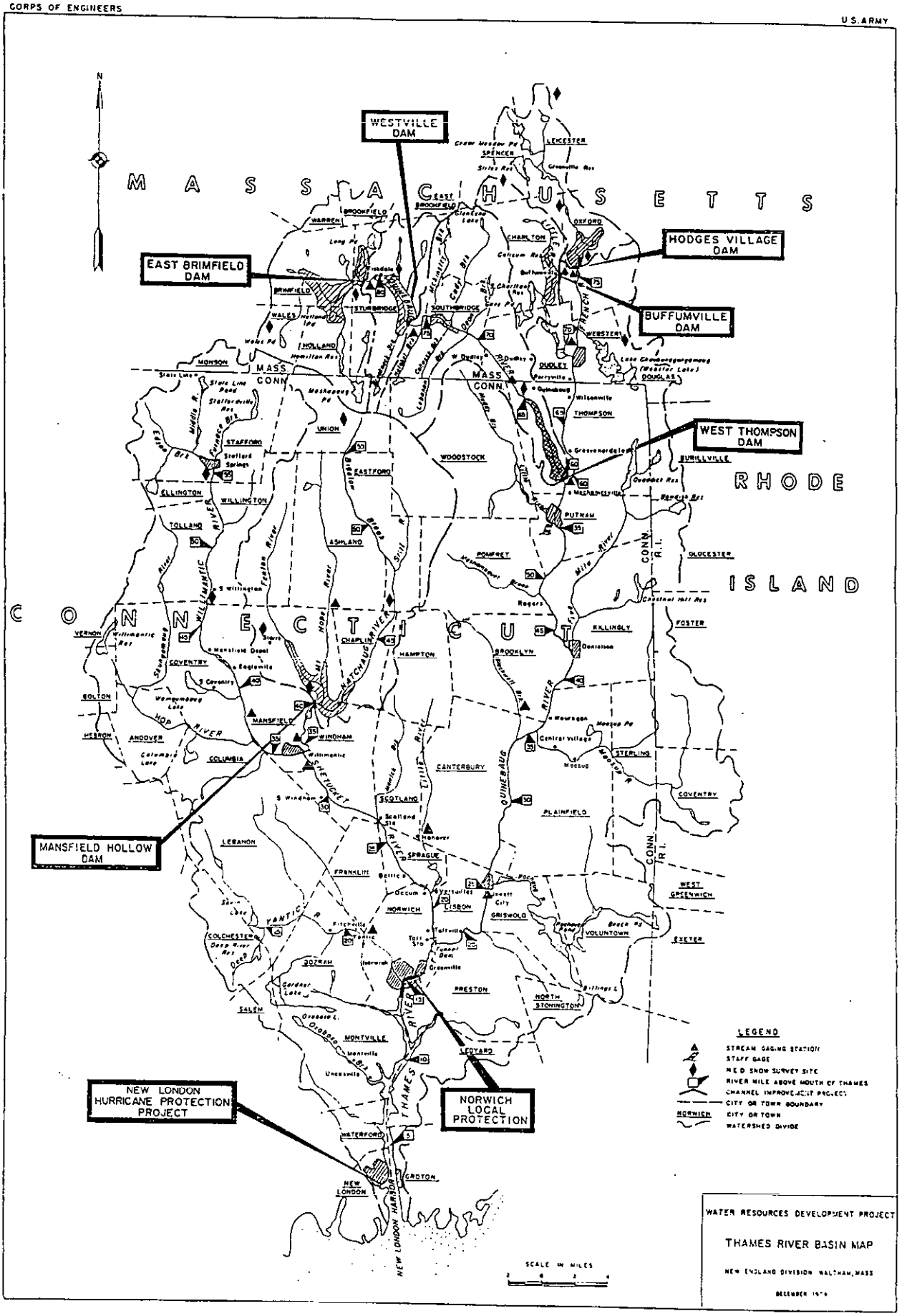
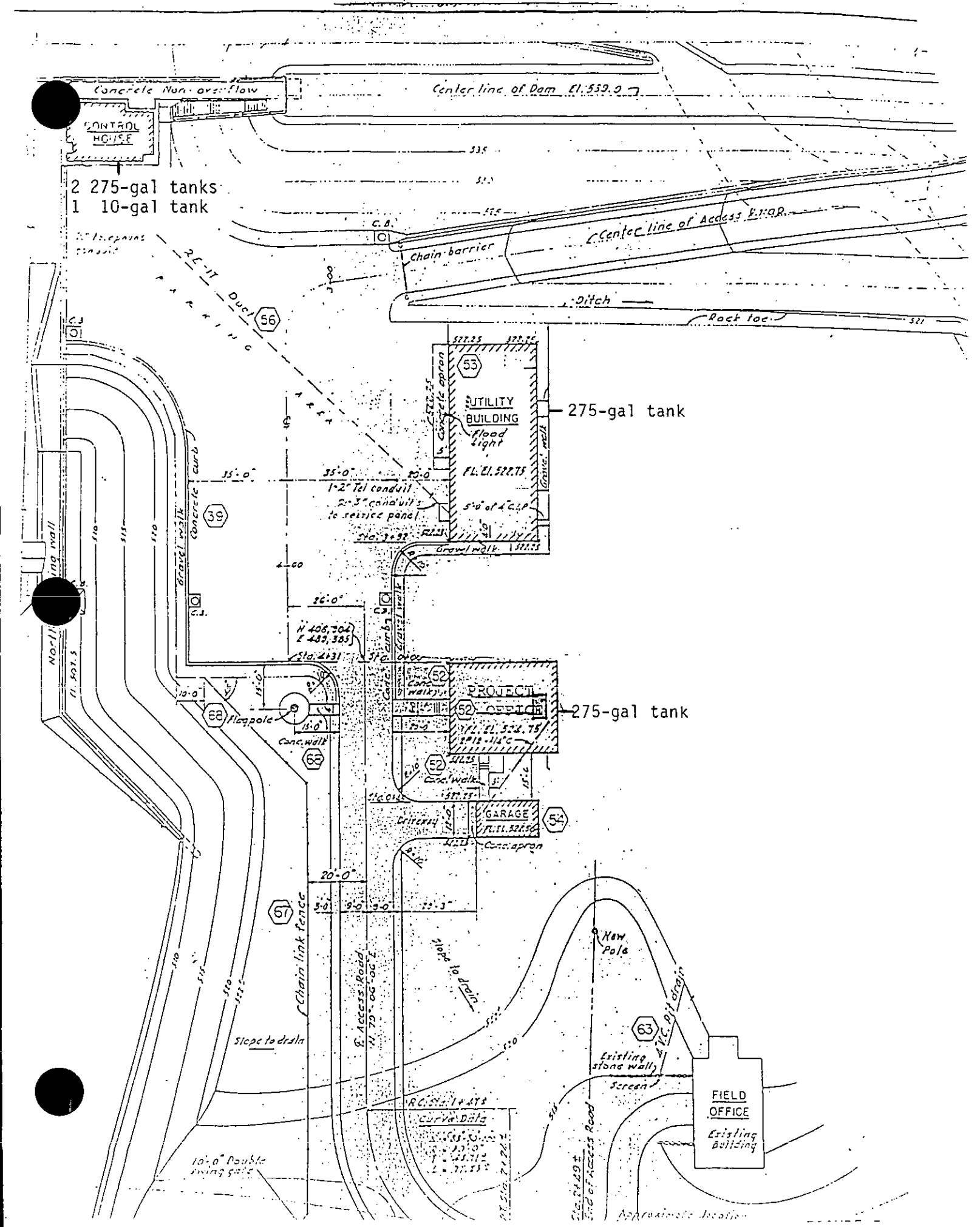


FIGURE 2

LOCATIONS OF OIL STORAGE TANKS



Appendix B

Oil storage Tank Inventory

Oil Storage Tank Inventory

Tank	Location	Capacity (gal)	Date Installed	Tank Type	Material of Construction	Fuel Type	Purpose	Secondary Containment	Leak Detection	Cathodic Protection
BV1	Basement of Office	275	1994	Single Wall	14 gage steel	Fuel Oil	Heat	None	No	No
BV2	Control House	275	1989	Single Wall	Steel	Fuel Oil	Heat	Yes	No	No
BV3	Control House	275	1989	Single Wall	Steel	Fuel Oil	Heat	Yes	No	No
BV4	Utility Building	275	1994	Double Wall	12 gage steel	Fuel Oil	Heat	Yes	No	No
BV5	Control House	10	1993	Single Wall	Steel	Fuel Oil	Generator Fuel	Yes	Yes	No

Note: All tanks are above ground.

Appendix C

Chemical Product Inventory

(This information is available at the project and may be included in this plan at the discretion of the project manager.)

Appendix D

Reportable Spill Quantities of Oil and Hazardous Substances

Appendix D1

Oil and Other Petroleum Products
Stored at Buffumville Lake

Oil and Other Petroleum Products Stored at Buffumville Lake

Product Name	Manufacturer	Location	Quantity	MA DEP RQ (gallons)[1]
HUSQVARNA Bar & Chain Oil	HUSQVARNA	Paint Locker	1 gal	10
3-1 Household Oil	Boyle Midway Oil	Paint Locker	8 oz	10
50:1 2-Cycle Engine Oil	HUSQVARNA	Paint Locker	6.4 oz	10
Ford Tractor Hydrualic Oil	Ford Tractor	Paint Locker	1 gal	10
Hy-Gard Trans Oil	Deere & Co.	Paint Locker	2 gal	10
Kendall Gear Lubricant	Kendall	Paint Locker	1 qt	10
Kendall Motor Oil 10-40	Kendall Refining Co.	Paint Locker	2 qts	10
Kendall Motor Oil 15 W 40	Kendall Refining Co.	Paint Locker	5 gal	10
Kendall Motor Oil SAE 30	Kendall Refining Co.	Paint Locker	3 qts	10
Marvel Lub Oil	Marvel Oil Co.	Paint Locker	4 oz	10
Marvel Mystery Oil	Marvel Oil Co.	Paint Locker	1 gal	10
Outboard Motor Oil, 50:1	Kendall Refining Co.	Paint Locker	24 qts	10
Permatex Hyd Jack Oil	Permatex	Paint Locker	1 qt	10
Quick Silver Formula 500 Oil	Marine Power Group	Paint Locker	16 oz	10
Gasoline		Paint Locker	25 gal	10
Diesel Fuel		Paint Locker	5 gal	10

MA DEP = Massachusetts Department of Environmental Protection

[1] RQ = Reportable Quantity under 310 CMR 40.1600

Federal Reportable Quantity for a spill is a "sheen".

Note: All oil at Buffumville Lake, except for fuel oil, can be considered to be lubricating oil, petroleum based oil, total petroleum hydrocarbons, or synthetic oil.

Appendix D2

Reportable Spill Quantities of Oil and Other Petroleum Products per 310 CMR

Reportable Spill Quantities of Oil and Other Petroleum Products per 310 CMR

Chemical Name	MA DEP RQ (gallons)[1]
Diesel Fuel	10
Fuel Oil #'s 2,4,5,6	10
Gasoline	10
Lubricating Oil	10
Petroleum Based Oil	10
Petroleum Hydrocarbons, Total (TPH)	10
Synthetic Oil	10

MA DEP = Massachusetts Department of Environmental Protection
[1] RQ = Reportable Quantity under 310 CMR 40.1600
Federal Reportable Quantity for a spill is a "sheen".

Note: All oil at Buffumville Lake, except for fuel oil, can be considered to be lubricating oil, petroleum based oil, total petroleum hydrocarbons, or synthetic oil.

Appendix D3

List of Hazardous Substances and
Reportable Quantities per 40 CFR 302

(This information is available at the project and may be included in this plan at the discretion of the project manager.)

Appendix E

Emergency Spill Response Equipment and Materials
and Checklist

Appendix E1

Emergency Spill Response Equipment and Materials

Emergency Spill Response Equipment and Materials

The following emergency spill response equipment and materials are available at Buffumville Lake. These materials are stored in the Buffumville Lake utility building in the cabinet labelled "Hazardous Materials Spill Kit."

Item	Dimensions	Quantity
Boom	50 feet long	1
Pig	4 feet long	30
Drain blocker	18" x 18"	1
Absorbent sheets	2' x 2'	1 bale (250 feet)
Drip pan	8" x 8" x 3"	24
Snow Fence (Temporary Barrier)		

Appendix E2

Emergency Spill Response Equipment and Materials Checklist

Emergency Spill Response Equipment and Materials Checklist

Date:				
Item	Location	Dimensions	Quantity on hand	Condition (excellent, good, fair, poor, etc.)
Boom	Utility Building	50 feet long		
Pig	Utility Building	4 feet long		
Drain blocker	Utility Building	18" x 18"		
Absorbent sheets	Utility Building	2' x 2'		
Drip pan	Utility Building	8" x 8" x 3"		
Snow Fence				
(Temporary Barrier)				
Comments:				

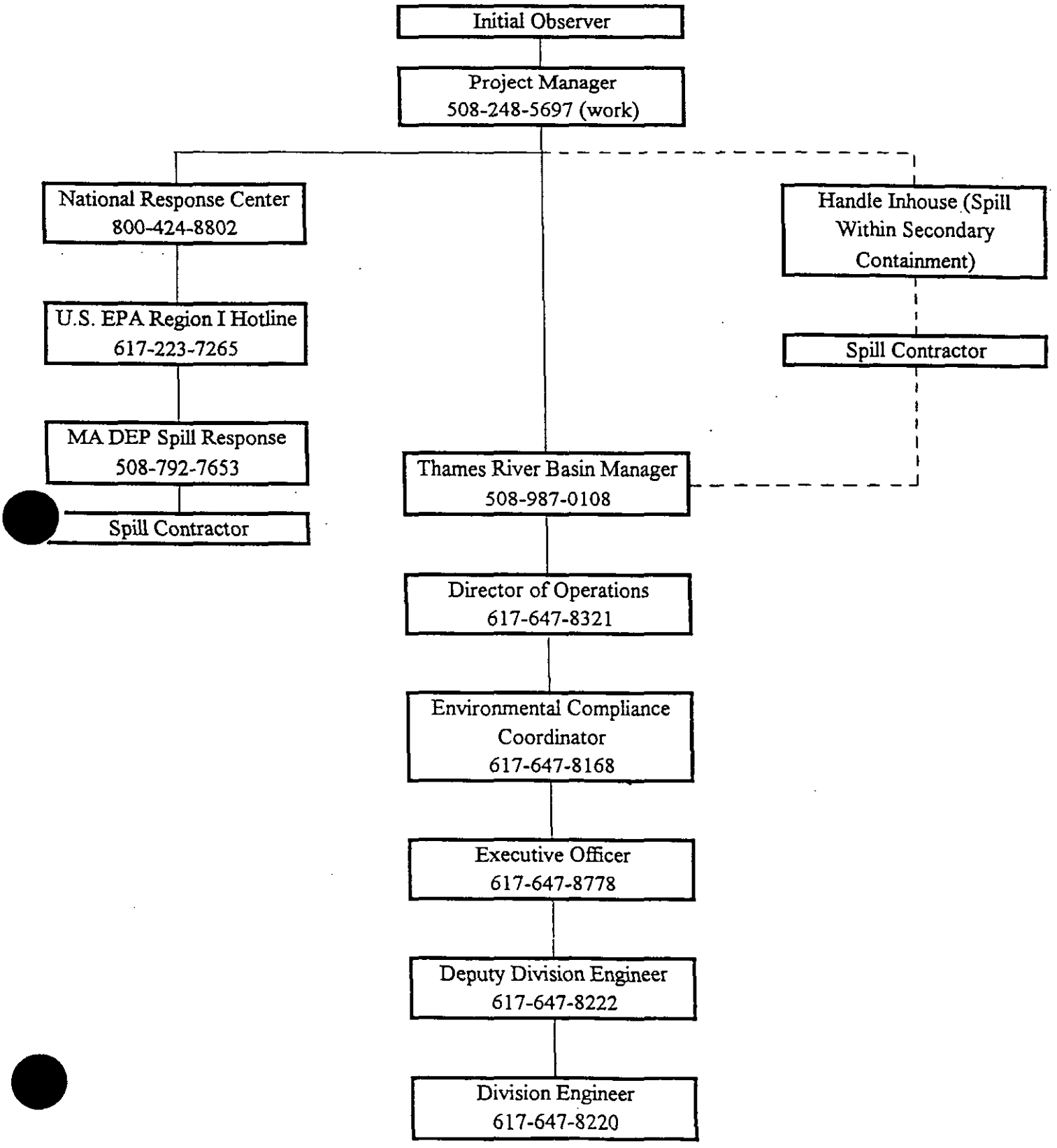
Inspected by: _____

Project Manager: _____

Appendix F

Chain of Responsibility

Chain of Responsibility



Appendix G

Spill Discovery Checklist

Spill Discovery Checklist

The following information must be determined to the greatest extent possible upon discovery or notification of a spill:

1. Name, location, and type or function of the facility
2. Name, address, and telephone number of the person completing report and the point of contact for further information
3. Time of the spill discovery
4. The specific location of the spill and body of water affected, if any
5. Type of substance spilled (e.g. fuel oil, gasoline, etc.)
6. Estimated amount of material spilled
7. Source of spill
8. Cause of spill
9. Duration of discharge
10. Proximity of spill to areas where people are known to congregate or to vulnerable areas needing immediate protection
11. On-scene weather
12. Response action taken, if any
13. Agencies notified

	Agencies notified	Yes/No	By Whom	When
a.	National Response Center	_____	_____	_____
b.	US EPA Region I Hotline	_____	_____	_____
c.	Massachusetts D.E.P.	_____	_____	_____
d.	Director of Operations, NED	_____	_____	_____
e.	Environmental Compliance Coordinator, NED	_____	_____	_____
f.	Federal Emergency Management Agency	_____	_____	_____
g.	Chemtrek Emergency Spill Information	_____	_____	_____
h.	Charlton Fire Department	_____	_____	_____
i.	Massachusetts State Police	_____	_____	_____
j.	Other_____	_____	_____	_____
k.	Other_____	_____	_____	_____

Appendix H

Emergency Spill Response Agency
and Organization List

Emergency Spill Response
Agency and Organization List

EMERGENCY SPILLS REQUIRE IMMEDIATE NOTIFICATION OF BOTH FEDERAL AND STATE AUTHORITIES. A CALL TO THE NATIONAL RESPONSE CENTER SHOULD BE FOLLOWED BY A CALL TO THE APPROPRIATE STATE AGENCY.

PROJECT MANAGER, BUFFUMVILLE LAKE

508-248-5697 (WORK)

NATIONAL RESPONSE CENTER

800-424-8802

U.S. EPA REGION I HOTLINE

617-223-7265

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) SPILL RESPONSE

508-792-7653

FEDERAL EMERGENCY MANAGEMENT AGENCY

215-931-5500

CHEMTREK EMERGENCY SPILL INFORMATION

800-424-9300

CHARLTON FIRE DEPARTMENT

508-248-5321

MASSACHUSETTS STATE POLICE

508-248-5816

APPROVED EMERGENCY SPILL CONTRACTORS

1. CLEAN HARBORS
   - SHREWSBURY 508-842-0100
   - BOSTON 617-269-5830

2. ZECCO
   - NORTHBORO 508-393-2537

Appendix I

Title 29, CFR, 1994 rev, Part 1910.120(q);
Hazardous Waste Operations and Emergency Response

(q) *Emergency response to hazardous substance releases.* This paragraph covers employers whose employees are engaged in emergency response no matter where it occurs except that it does not cover employees engaged in operations specified in paragraphs (a)(1)(i) through (a)(1)(iv) of this section. Those emergency response organizations who have developed and implemented programs equivalent to this paragraph for handling releases of hazardous substances pursuant to section 303 of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. 11003) shall be deemed to have met the requirements of this paragraph.

(1) *Emergency response plan.* An emergency response plan shall be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The plan shall be in writing and available for inspection and copying by employees, their representatives and OSHA personnel. Employers who will

evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements of this paragraph if they provide an emergency action plan in accordance with §1910.38(a) of this part.

(2) *Elements of an emergency response plan.* The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following to the extent that they are not addressed elsewhere:

(i) Pre-emergency planning and coordination with outside parties.

(ii) Personnel roles, lines of authority, training, and communication.

(iii) Emergency recognition and prevention.

(iv) Safe distances and places of refuge.

(v) Site security and control.

(vi) Evacuation routes and procedures.

(vii) Decontamination.

(viii) Emergency medical treatment and first aid.

(ix) Emergency alerting and response procedures.

(x) Critique of response and follow-up.

(xi) PPE and emergency equipment.

(xii) Emergency response organizations may use the local emergency response plan or the state emergency response plan or both, as part of their emergency response plan to avoid duplication. Those items of the emergency response plan that are being properly addressed by the SARA Title III plans may be substituted into their emergency plan or otherwise kept together for the employer and employee's use.

(3) *Procedures for handling emergency response.* (i) The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS assisted by the senior official present for each employer.

NOTE TO (q)(3)(i).—The "senior official" at an emergency response is the most senior official on the site who has the responsibility

for controlling the operations at the site. Initially it is the senior officer on the first-due piece of responding emergency apparatus to arrive on the incident scene. As more senior officers arrive (i.e., battalion chief, fire chief, state law enforcement official, site coordinator, etc.) the position is passed up the line of authority which has been previously established.

(ii) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.

(iii) Based on the hazardous substances and/or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations, and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet, at a minimum, the criteria contained in 29 CFR 1910.156(e) when worn while performing fire fighting operations beyond the incipient stage for any incident.

(iv) Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response, until such time that the individual in charge of the ICS determines through the use of air monitoring that a decreased level of respiratory protection will not result in hazardous exposures to employees.

(v) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of two or more.

(vi) Back-up personnel shall stand by with equipment ready to provide assistance or rescue. Advance first aid support personnel, as a minimum, shall also stand by with medical equipment and transportation capability.

(vii) The individual in charge of the ICS shall designate a safety official, who is knowledgable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.

(viii) When activities are judged by the safety official to be an IDLH condition and/or to involve an imminent danger condition, the safety official shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions needed to be taken to correct these hazards at the emergency scene.

(ix) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

(x) When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. All compressed air cylinders used with self-contained breathing apparatus shall meet U.S. Department of Transportation and National Institute for Occupational Safety and Health criteria.

(4) *Skilled support personnel.* Personnel, not necessarily an employer's own employees, who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that cannot reasonably be performed in a timely fashion by an employer's own employees, and who will be or may be exposed to the hazards at an emergency response scene, are not required to meet the training required in this paragraph for the employer's regular employees. However, these personnel shall be given an initial briefing at the site prior to their participation in any emergency response. The initial briefing shall include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed. All other appropriate safety and health precautions provided to the employer's own employees shall be used to assure the safety and health of these personnel.

(5) *Specialist employees.* Employees who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and who will be called upon to provide technical advice or assistance at a hazardous substance release incident to the individual in charge, shall receive training or demonstrate competency in the area of their specialization annually.

(6) *Training.* Training shall be based on the duties and function to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of this standard, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident. Employees who participate, or are expected to participate, in emergency response, shall be given training in accordance with the following paragraphs:

(i) *First responder awareness level.* First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

(A) An understanding of what hazardous substances are, and the risks associated with them in an incident.

(B) An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.

(C) The ability to recognize the presence of hazardous substances in an emergency.

(D) The ability to identify the hazardous substances, if possible.

(E) An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.

(F) The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

(ii) *First responder operations level.* First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level and the employer shall so certify:

(A) Knowledge of the basic hazard and risk assessment techniques.

(B) Know how to select and use proper personal protective equipment provided to the first responder operational level.

(C) An understanding of basic hazardous materials terms.

(D) Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.

(E) Know how to implement basic decontamination procedures.

(F) An understanding of the relevant standard operating procedures and termination procedures.

(iii) *Hazardous materials technician.* Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that

they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

(A) Know how to implement the employer's emergency response plan.

(B) Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.

(C) Be able to function within an assigned role in the Incident Command System.

(D) Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.

(E) Understand hazard and risk assessment techniques.

(F) Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.

(G) Understand and implement decontamination procedures.

(H) Understand termination procedures.

(I) Understand basic chemical and toxicological terminology and behavior.

(iv) *Hazardous materials specialist.* Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous materials specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency in the following areas and the employer shall so certify:

(A) Know how to implement the local emergency response plan.

(B) Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.

(C) Know of the state emergency response plan.

(D) Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.

(E) Understand in-depth hazard and risk techniques.

(F) Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.

(G) Be able to determine and implement decontamination procedures.

(H) Have the ability to develop a site safety and control plan.

(I) Understand chemical, radiological and toxicological terminology and behavior.

(v) *On scene incident commander.* Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

(A) Know and be able to implement the employer's incident command system.

(B) Know how to implement the employer's emergency response plan.

(C) Know and understand the hazards and risks associated with employees working in chemical protective clothing.

(D) Know how to implement the local emergency response plan.

(E) Know of the state emergency response plan and of the Federal Regional Response Team.

(F) Know and understand the importance of decontamination procedures.

(7) *Trainers.* Trainers who teach any of the above training subjects shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they shall have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.

(8) *Refresher training.* (i) Those employees who are trained in accordance with paragraph (q)(6) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

(ii) A statement shall be made of the training or competency, and if a statement of competency is made, the employer shall keep a record of the methodology used to demonstrate competency.

(9) *Medical surveillance and consultation.* (i) Members of an organized and designated HAZMAT team and hazardous materials specialists shall receive a baseline physical examination and be provided with medical surveillance as required in paragraph (f) of this section.

(ii) Any emergency response employees who exhibits signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident, either immediately or subsequently, shall be provided with medical consultation as required in paragraph (f)(3)(ii) of this section.

(10) *Chemical protective clothing.* Chemical protective clothing and equipment to be used by organized and designated HAZMAT team members, or to be used by hazardous materials specialists, shall meet the requirements of paragraphs (g) (3) through (5) of this section.

(11) *Post-emergency response operations.* Upon completion of the emergency response, if it is determined that it is necessary to remove hazardous substances, health hazards, and materials contaminated with them (such as contaminated soil or other elements of the natural environment) from the site of the incident, the employer conducting the clean-up shall comply with one of the following:

(i) Meet all of the requirements of paragraphs (b) through (o) of this section; or

(ii) Where the clean-up is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of the following: 29 CFR 1910.38(a); 1910.134; 1910.1200, and other appropriate safety and health training made necessary by the tasks that they are expected to be performed such as personal protective equipment and decontamination procedures. All equipment to be used in the performance of the clean-up work shall be in serviceable condition and shall have been inspected prior to use.

Appendix J

Required Spill Notification Times Defined
Under 310 CMR

REQUIRED SPILL NOTIFICATION TIMES AS DEFINED IN 310 CMR	
REQUIRED NOTIFICATION TIME TO STATE	**CRITERIA FOR SPILLS OF OIL AND HAZARDOUS SUBSTANCES**
2 HOURS	1. Quantity released greater than reportable quantity (10 gallons for items on project) which occurred within 24 hours or less
	2. Quantity is unknown but likely to be reportable quantity (10 gallons) or greater
	3. The appearance of a sheen (iridescent appearance of any oil or waste oil on the surface of any river, stream, lake, pond, spring, impoundment, estuary, or groundwater)
	4. Detection of reportable quantity (1 mg/l or 1 ppm total petroleum hydrocarbons) or greater in a private drinking water supply well
	5. Any quantity which could pose or poses an imminent hazard as defined: - release which results in oil/hazardous material vapors within buildings or underground utility conduits at a concentration equal to or greater than 10% of lower explosive limit as measured by combustible gas indicator (CGI) etc. - release of reactive or explosive material - release to roadway which endangers public safety - release which poses adverse impacts to fresh water or saltwater fish populations - measurement of the following or greater within a depth of six inches below the ground surface at any location within 500 feet of a residential dwelling, school, playground, recreation area, or park, unless access by children is controlled by physical barrier: Arsenic (total) 40 ug/g Cadmium (total) 60 ug/g Chromium (VI) 10,000 ug/g Cyanide (available) 100 ug/g Mercury (total) 300 ug/g Methyl Mercury 10 ug/g PCB total) 10 ug/g

REQUIRED SPILL NOTIFICATION TIMES AS DEFINED IN 310 CMR	
REQUIRED NOTIFICATION TIME TO STATE	**CRITERIA FOR SPILLS OF OIL AND HAZARDOUS SUBSTANCES**
2 HOURS	6. Release of any quantity of oil/hazardous material that is directly discharged to stormwater drainage or sanitary sewage system
	7. Threat of release which is about to occur and quantity would be reportable (10 gallons) or greater
	8. Threat of release which would pose imminent hazard as defined in 5 above, regardless of quantity
72 HOURS	1. Release indicated by subsurface Non-Aqueous Phase Liquid (NAPL), excluding non-recurring sheens
	2. Release indicated by presence of oil/ petroleum products adjacent to underground storage tank, if total organic vapors "as benzene", measured by a flame ionization detector, is equal to at least 50 parts per million
	3. Release of reportable concentration (1 mg/l or 1 ppm total petroleum hydrocarbons) indicated by measurement in groundwater within Zone I (protective radius, defined by pump tests for each well) of public water supply well or within 500 feet of a private water supply well
	4. Release to groundwater indicated by measurement of at least 5 mg/l total volatile organic compounds at point within 30 feet of school or occupied residential structure where groundwater table is less than 15 feet below ground surface
	5. Threat of spill from underground storage tank, if leak is likely to be 0.05 gallons per hour in single wall tank, 0.05 gallons per hour in inner wall of double-walled tank, or any leak in the outer wall of double-walled tank

REQUIRED SPILL NOTIFICATION TIMES AS DEFINED IN 310 CMR	
REQUIRED NOTIFICATION TIME TO STATE	**CRITERIA FOR SPILLS OF OIL AND HAZARDOUS SUBSTANCES**
120 DAYS	1. Release of oil/hazardous materials indicated by measurement in soil above reportable concentrations (RC) listed below - within 500' of a residential dwelling, residentially zoned property, school, playground, recreational area or park **RC = 500 mg/kg** total petroleum hydrocarbons (TPH) - if not within limits above then **RC = 2500 mg/kg** total petroleum hydrocarbons
	2. Release of oil/hazardous materials to groundwater indicated by measurement in groundwater of amount equal to or greater than reportable concentrations listed below - within Zone II (area which contributes water to well under most severe pumping and recharge conditions, determined by pump tests for each well)for public water supply - within Interim Wellhead Protection Area for a public water supply - within all potentially productive aquifers - within zone A (500 feet laterally from bank) of Class A surface water body used as a public water supply - within 500 feet of public water supply well: **RC = 1 mg/l or 1 ppm** - if not within limits above then **RC = 50 mg/l or 50 ppm**

Appendix K

Above Ground Oil Storage Tank
Inspection Log Sheet

Above Ground Oil Storage Tank Inspection Log Sheet

Date:								
		Inspected tanks at:						
AST	Location/Description	Secondary Containment	Seams	Rivets	Nozzle Connections	Valves	Pumps	Piping
BV1	Basement of Office							
BV2	Control House (275 gal)							
BV3	Control House (275 gal)							
BV4	Utility Building							
BV5	Control House (10 gal)							
Comments:								

Inspected by: _____

Project Manager: _____

Appendix L

Training Log Sheet

Training Log Sheet

Employee:			
Training	Employee Initials	Date Training Completed	PM Initials
Annual SPCCP/SCP Review			
Prevention, Containment, and Retrieval Methods			
Inspection Procedures			
Operation and Maintenance of Equipment Used to Prevent Spills			
Review of Regulations			
Comments:			

Appendix M

Massachusetts Department of Environmental Protection
Oil and Hazardous Material Incident Reports

MASSACHUSETTS OIL & HAZARDOUS MATERIAL INCIDENT REPORT

(circle or fill in all that apply)

Response Date: 2/29/92 Closed: (Yes) No SA #: ___-___ ER #: C92-088

Initial Office Follow-up Office (Initial Field) Follow-up Field 21E Notification Amended

City/Town: Charlton Spill Name: Davis Vehicle Accident

Address: ### Oxford Rd. Reported: 2/29/92 Time: 04:06 (AM)/PM

Half Town: ___ Zip Code: ___ Occurred: 2/29/92 Time: 02:10 (AM)/PM

Notifier: Rick Kwiatkowski / Charlton HW Committee (508) 248-5565
(Name) Check if Anonymous [ ] (Affiliation) (Phone)

PRIMARY SPILL INFORMATION

(Petroleum) / Hazardous / Both / Neither / Unknown

Material: Gasoline/Oil/Hydraulic Fluid Amount Reported: UNK. (Gallons) Drums Cu Yds Lbs

(Virgin) / Waste (Non-PCB) / PCB ___ ppm / UnKnown Amount Actual: ___ Vapors Sheen None Unknown

Environmental Impact: SOIL AIR GROUNDWATER (SURFACE WATER) ZONE 2 WATER SUPPLY STORM DRAIN SCHOOL

OTHER: ___

Spill Source: U.S.T. A.S.T. TRANSFORMER (VEHICLE FUEL TANK) PIPE/HOSE/LINE

BOAT DRUMS VEHICLE TANKER TRUCK UNKNOWN OTHER: ___

Release Type: SPILL FIRE OVERFILL TANK REMOVAL TEST FAILURE (VEHICLE ACCIDENT)

RUPTURE LEAK DUMPING THREAT ONLY UNKNOWN OTHER: ___

Description: Pickup truck went off the road over the Rip-Rap Rock embankment and Ruptured the fuel tank the oil pan, and the Hydraulic system releasing product to the Backwaters of the Buffumville Reservoir. PRP could not be reached, so I called in Tecco. Tecco Applied pads and scraped off contaminated ice and placed in a drum for disposal. PRP accepted responsibility ltr. No Further DEP Action Necessary

Referral Within DEP: SA HW WS SW AQC WPC WW IWW ENF/SF Staff: ___

State Contractor: Used: ___ (Not Used) Federal L.U.S.T. Eligible: (No) Yes Category: ___

Further DEP Response: Yes (No) Pending Response Needed:

PRP INFORMATION

Name: Elizabeth Davis Company: ___

Address: 245 Oxford Rd Town: Charlton State: MA Zip: ___

Business Phone: (___) ___ - ___ Home Phone: (508) 248-9582

NOR Issued: Verbal (Field) Office Date: 2/29/92 Responsibility Accepted: (Yes) No

PRP Contractor: Tecco Contact: Jeff Perron Phone: (508) 393-2537

Noncompliance Issues:

OTHER AGENCIES INVOLVED IN OR NOTIFIED OF INCIDENT

Agency: Army Corps of Engineers Date: 2/29/92 Time: 11:40 (AM)/PM

First Contact By: DEP OTHER AGENCY Phone: (508) 248-5697 Contact: ___

Agency: ___ Date: ___/___/___ Time: ___:___ AM/PM

First Contact By: DEP OTHER AGENCY Phone: (___) ___ - ___ Contact: ___

DEP Staff Notified: ___ ER Lead: Cooperman

Report Prepared By: ___ Signature: ___

IR-92 Copy Distribution: White/Regional Office Yellow/Boston Office Pink & Goldenrod/Regional Office

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

NOTICE OF RESPONSIBILITY
PURSUANT TO M.G.L. CHAPTER 21E

TO: Elizabeth Davis
345 Central St
Chelsea MA

IR #: C92-088

On Feb. 24 1992 at 4:00 (p.m.)(a.m.) the Department of Environmental Quality Engineering (Department) responded to a release/threat of release of oil/hazardous material at Bellingville Reservoir in Chelsea, Massachusetts (the site).

Preliminary indications are that pursuant to section 5 of M.G. L. Chapter 21E Elizabeth Davis is/are a party responsible for assessment, containment and removal actions necessitated by this incident.

Massachusetts General Laws, Chapter 21E, places liability on responsible parties to: (1) pay for all response action costs associated with the incident and (2) compensate for any damage to natural resources resulting from the incident.

You may assume responsibility for emergency response actions/costs by paying for all response costs incurred by the Department relative to this incident and immediately performing the items checked off below:

- [x] Hire a spill cleanup contractor acceptable to the Department to take all necessary emergency response actions (i.e. assessment, containment and/or removal) as required by the Department.
- [x] Dispose of the contaminated soil generated at the site in conformance with the Department's current policies for management of virgin petroleum-contaminated soils. Written approval must be obtained from the Department prior to removal of the soil.
- [ ] Collect soil/water samples before and after cleanup, from the impacted environmental media and submit results of a certified laboratory analysis for: _____
- [x] Submit a report providing an accurate description of the incident, response actions taken relative thereto, and site conditions (including supporting documents) immediately or upon receipt of analytical results.
- [ ] Other _____

The above actions must be performed immediately and/or completed no later than March 6 1992. Depending on the information/data generated by the above work, the Department may require additional remedial response actions.

If you fail to complete the response action(s) required by the Department within the required timeframe, the Department will take appropriate response actions and seek to recover all costs, charges and damages.

By accepting responsibility for conducting the required response actions now you can:

- minimize administrative costs incurred by the Department in handling this matter (In spill cases, administrative costs incurred by the Department are at least $1,000.00);
- avoid interest charges on the total liability at the statutory rate of 12% compounded annually; and
- avoid treble damages (i.e., 3 times the total amount of response costs the Department incurs).

This liability constitutes a debt to the Commonwealth. The debt, together with interest, creates a lien on all your property in the Commonwealth. In addition to the foreclosure remedy provided by the lien, the Attorney General of the Commonwealth may recover that debt or any part of it in an action against you. You may also be liable under M.G.L. C. 21E, section 11 for up to $100,000 in fines or penalties for each violation of C. 21E as well as for additional penalties or damages pursuant to other statutes or common law.

The Department encourages potentially responsible parties to provide or arrange for response actions to minimize the Department's response action costs for which you may be liable. The Department's objective is to ensure public health and safety and to protect the environment. Only with your help can this goal be achieved.

Please submit the requested information and direct any questions regarding this matter to Steve Cochrane at the Central Regional Office, 75 Grove St. Worcester Massachusetts, telephone # 792-7653.

Very truly yours,

M-2

Preliminary indications are that pursuant to section 5 of M.G. L. Chapter 21E [redacted] is/are a party responsible for assessment, containment and removal actions necessitated by this incident.

Massachusetts General Laws, Chapter 21E, places liability on responsible parties to: (1) pay for all response action costs associated with the incident and (2) compensate for any damage to natural resources resulting from the incident.

You may assume responsibility for emergency response actions/costs by paying for all response costs incurred by the Department relative to this incident and immediately performing the items checked off below:

- [x] Hire a spill cleanup contractor acceptable to the Department to take all necessary emergency response actions (i.e. assessment, containment and/or removal) as required by the Department.
- [x] Dispose of the contaminated soil generated at the site in conformance with the Department's current policies for management of virgin petroleum-contaminated soils. Written approval must be obtained from the Department prior to removal of the soil.
- [ ] Collect soil/water samples before and after cleanup, from the impacted environmental media and submit results of a certified laboratory analysis for: _____.
- [x] Submit a report providing an accurate description of the incident, response actions taken relative thereto, and site conditions (including supporting documents) immediately or upon receipt of analytical results.
- [ ] Other _____.

The above actions must be performed immediately and/or completed no later than March 6, 1992. Depending on the information/data generated by the above work, the Department may require additional remedial response actions.

If you fail to complete the response action(s) required by the Department within the required timeframe, the Department will take appropriate response actions and seek to recover all costs, charges and damages.

By accepting responsibility for conducting the required response actions now you can:

- minimize administrative costs incurred by the Department in handling this matter (**In spill cases, administrative costs incurred by the Department are at least $1,000.00**);
- avoid interest charges on the total liability at the statutory rate of 12% compounded annually; and
- avoid treble damages (i.e., 3 times the total amount of response costs the Department incurs).

This liability constitutes a debt to the Commonwealth. The debt, together with interest, creates a lien on all your property in the Commonwealth. In addition to the foreclosure remedy provided by the lien, the Attorney General of the Commonwealth may recover that debt or any part of it in an action against you. You may also be liable under M.G.L. C. 21E section 11 for up to $100,000 in fines or penalties for each violation of C. 21E as well as for additional penalties or damages pursuant to other statutes or common law.

The Department encourages potentially responsible parties to provide or arrange for response actions to minimize the Department's response action costs for which you may be liable. The Department's objective is to ensure public health and safety and to protect the environment. Only with your help can this goal be achieved.

Please submit the requested information and direct any questions regarding this matter to Steve Lipman [redacted] at the Central Regional Office, 75 Grove St. Worcester Massachusetts, telephone # 792-7653.

Very truly yours,

[redacted] and Title of DEQE Official

On February 26, 1992 at approximately 7:45 AM I, Steve Lipman [redacted] of the above DEQE Office served upon

✓ personally _____ by certified mail Elizabeth Davis a copy

of the above "Notice of Responsibility". Person on-scene ✓ agrees _____ does not agree to take the response actions deemed necessary by the Department.

Copy Distribution: White/Potential Responsible Party Yellow/Boston Pink/Region Golden Rod/Region

MASSACHUSETTS DEP OIL & HAZARDOUS MATERIAL INCIDENT REPORT

(circle or fill in all that apply)

Response Date: 8/15/93 Closed: (Yes) No SA #: ___-___ ER #: C-93-0406

Initial Office Follow-up Office (Initial Field) Follow-up Field 21E Notification Amended

City/Town: Oxford Spill Name: Buffumville Release

Address: Town Boat Landing Charlton St. Reported: 8/15/93 Time: 8:00 (AM)/PM

Half Town: ___ Zip Code: ___ Occurred: 8/15/93 Time: 7:00 (AM)/PM

NOTIFIER: Thomas Purcell (Oxford Fire Dept) (508) 987-0156
(Name) Check if Anonymous [ ] (Affiliation) (Phone)

PRIMARY SPILL INFORMATION

(Petroleum) / Hazardous / Both / Neither / Unknown

Material: Oil/gasoline Amount Reported: unknown small quantity Gallons Drums Cu Yds Lbs

Virgin / Waste Non-PCB / PCB ___ ppm / UnKnown Amount Actual: unknown Vapors Sheen None Unknown

Environmental Impact: SOIL AIR GROUNDWATER (SURFACE WATER) ZONE 2 WATER SUPPLY STORM DRAIN SCHOOL

RESIDENCE OTHER: ___

Spill Source: U.S.T. A.S.T. TRANSFORMER VEHICLE FUEL TANK PIPE/HOSE/LINE

BOAT DRUMS (VEHICLE) TANKER TRUCK UNKNOWN OTHER: ___

Release Type: SPILL FIRE OVERFILL TANK REMOVAL TEST FAILURE (VEHICLE ACCIDENT)

RUPTURE LEAK DUMPING THREAT ONLY UNKNOWN OTHER: ___

Description: Boat trailer and tow vehicle rolled in to water all were submerged beneath water - residual oil and gasoline were released from vehicle - no direct oil/gasoline release from fuel tanks - resulted in sheen of oil on water surface - Local responded with Oxford Fire Dept. applied absorbent boom & pads - clean up completed

Referral Within DEP: SA HW WS SW AQC WPC WW IWW ENF/SF Staff: ___

State Contractor: Used: ___ (Not Used) Federal L.U.S.T. Eligible: No Yes Category: ___

Further DEP Response: Yes (No) Pending Response Needed:

PRP INFORMATION

Company: ___ Name: Thomas Frongillo

Address: 44 Ennis Rd Town: Oxford, MA State: Ma Zip: ___

Business Phone: (___) ___-___ Home Phone: (508) 987-0421

NOR Issued: Verbal Field Office Date: ___/___/___ Responsibility Accepted: (Yes) No

PRP Contractor: Jesco Thatcher Contact: ___ Phone: (505) 393-2537

Noncomoliance Issues:

OTHER AGENCIES INVOLVED IN OR NOTIFIED OF INCIDENT

Agency: US Corp of Eng Date: 8/15/93 Time: 8:00 (AM)/PM David Stickleen

First Contact By: DEP OTHER AGENCY Phone: ( ) - Contact:

Agency: ___ Date: ___/___/___ Time: ___:___ AM/PM

First Contact By: DEP OTHER AGENCY Phone: ( ) - Contact:

DEP Staff Notified: ___ ER Lead: ___

Report Prepared By: Frank Sciammarella Signature: Frank Sciammarella

18-6/92 Copy Distribution: White/Regional Office ... Boston Office Pink & Goldenrod/Regional Office

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL ~~QUALITY ENGINEERING~~ Protection

NOTICE OF RESPONSIBILITY

PURSUANT TO M.G.L. CHAPTER 21E

TO: Thomas Franklin [illegible]
47 [illegible] Rd
[illegible]

IR #: C-93-0406

On Aug 15 1993 at 8:00 (p.m./a.m.) the Department of Environmental ~~Quality Engineering~~ Protection (Department) responded to a release/threat of release of oil/hazardous material at [illegible] in Oxford, Massachusetts (the site).

Preliminary indications are that pursuant to section 5 of M.G. L. Chapter 21E Thomas Franklin is/are a party responsible for assessment, containment and removal actions necessitated by this incident.

Massachusetts General Laws, Chapter 21E, places liability on responsible parties to: (1) pay for all response action costs associated with the incident and (2) compensate for any damage to natural resources resulting from the incident.

You may assume responsibility for emergency response actions/costs by paying for all response costs incurred by the Department relative to this incident and immediately performing the items checked off below:

- [x] Hire a spill cleanup contractor acceptable to the Department to take all necessary emergency response actions (i.e. assessment, containment and/or removal) as required by the Department.
- [ ] Dispose of the contaminated soil generated at the site in conformance with the Department's current policies for management of virgin petroleum-contaminated soils. Written approval must be obtained from the Department prior to removal of the soil.
- [ ] Collect soil/water samples before and after cleanup, from the impacted environmental media and submit results of a certified laboratory analysis for: __________
- [ ] Submit a report providing an accurate description of the incident, response actions taken relative thereto, and site conditions (including supporting documents) immediately or upon receipt of analytical results.
- [ ] Other__________

The above actions must be performed immediately and/or completed no later than __________. Depending on the information/data generated by the above work, the Department may require additional remedial response actions.

If you fail to complete the response action(s) required by the Department within the required timeframe, the Department will take appropriate response actions and seek to recover all costs, charges and damages.

By accepting responsibility for conducting the required response actions now you can:

- minimize administrative costs incurred by the Department in handling this matter **(in spill cases, administrative costs incurred by the Department are at least $1,000.00)**;
- avoid interest charges on the total liability at the statutory rate of 12% compounded annually; and
- avoid treble damages (i.e., 3 times the total amount of response costs the Department incurs).

This liability constitutes a debt to the Commonwealth. The debt, together with interest, creates a lien on all your property in the Commonwealth. In addition to the foreclosure remedy provided by the lien, the Attorney General of the Commonwealth may recover that debt or any part of it in an action against you. You may also be liable under M.G.L. C. 21E, section 11 for up to $100,000 in fines or penalties for each violation of C. 21E as well as for additional penalties or damages pursuant to other statutes or common law.

The Department encourages potentially responsible parties to provide or arrange for response actions to minimize the Department's response action costs for which you may be liable. The Department's objective is to ensure public health and safety and to protect the environment. Only with your help can this goal be achieved.

Please submit the requested information and direct any questions regarding this matter to [illegible] at the Central Regional Office, Worcester Massachusetts, telephone # (508) 792-7653

Very truly yours,

[signature]

M-5

Oxford Fire Department

One Barton Street
Oxford, Massachusetts 01540
(508) 987-6032 • Fax (508) 987-6048

C-93-0406

RECEIVED
SEP 01 1993

AUGUST 18, 1993

TO: BOARD OF FIRE ENGINEERS

FROM: THOMAS P. PURCELL, DEPUTY CHIEF

SUBJECT: BUFFUMVILLE BOAT RAMP/HAZMAT

On August 15, 1993, at approximately 0610 hours, the Oxford Fire Department/HazMat Unit was summoned for Mutual Aid for a hazardous materials release at the Buffumville Park Boat Ramp. The release of petroleum products directly into the Buffumville Pond was as a result of the accidental submersion of a 1977 E-350 Ford Van while attempting to off-load a motorboat.

The HazMat Team immediately placed a continuous boom of absorbant materials around the perimeter of the sheen on the surface of the water and summoned two divers to ascertain the exact location of the submerged van. With the boom in place and the van located, the D.E.P., Charlton Fire Department and the U.S. Army Corps of Engineers were then notified. The owner of the van requested that M&E Zecco be summoned to provide site clean up. A wrecker was also summoned by the van owner to retrieve the vehicle.

Once the vehicle was recovered, Deputy Chief Ashe of Charlton Fire and Mr. Stiddmen of the Army Corps opted to close the boat ramp until site clean up was performed. Mr. Scianimeo of D.E.P. relayed to the HazMat Unit via telephone that the scene appeared to be under control and requested that a report be forwarded to him.

The field supervisor from M&E Zecco arrived at about 0730 hours. Upon inspection, it was decided to retrieve the boom and sweep the product to a confined area for final clean up. It would appear that less than five gallons of product were released and what little product evidenced in the release was recovered. A non-recoverable sheen remained on the water after clean up that would be dispersed by dilution and environmental activity.

The Oxford Fire Department returned to quarters at approximately 0830 hours.

Below is listed the information of the van, owner and insurance:

Name: Thomas Fongillo
Address: 44 Ennis Road, North Oxford, MA 01537
Telephone: (508)987-0421
Vehicle: 1977 Ford E-350 Mass. Reg. 709-GRI
VIN#: 1E34HH218662
Ins. Co.: Aetna Casualty & Surety
Ins. Agent: Mallozzi Insurance Agency

Should you have any questions regarding the above, please contact me.

cc: D.E.P. - HazMat Release/ Corps of Engineers/ Charlton Fire Department / Charlton Police Department

Appendix N

Title 310, CMR, 1995 rev, Part 30.253;
Generator Standards Governing Waste Oil and Used Oil Fuel

(This information is available at the project and may be included in this plan at the discretion of the project manager.)

Appendix O

Recommendations

RECOMMENDATIONS

The following recommendations resulted from an initial inspection of Buffumville Lake, carried out by the Environmental Engineering and Hydraulics Branch on 10 January 1995. The inspection determined the spill response and control resources at the project, and the basis of the spill contingency plan.

a. Secondary containment should be installed for the oil storage tank in the office basement (BV1); thereby, any oil that is leaked or spilled from it would be captured. Since there are no drains in the basement, the basement itself is acting as the secondary containment for the oil tank. However, the basement is not an approved secondary containment structure, as required under Federal regulation 29 CFR 1910.106(d)(4). The floors and walls of the basement are not sealed or leak-proof. An approved secondary containment structure, installed around the tank, would make the cleanup of a spill or leak from the tank much easier, and less complicated in regard to notification requirements. It would also reduce the risk of oil contaminating soil and groundwater beneath the basement.

b. All oil and hazardous substances (for the purpose of this plan) should be reduced in quantity and properly stored in flammable storage cabinets. All quantities should be reduced and maintained below the MA DEP's Reportable Quantity thresholds. By doing this, the chance of a reportable spill occurring is greatly reduced. This action will also allow all oil, except fuel oil, and hazardous substances to be stored in flammable storage cabinets. These cabinets have secondary containment structures that are approved under 29 CFR 1910.106(d)(3); the existing paint locker has no approved secondary containment. Excess quantities should be surplused or returned to the NED warehouse for disposal or redistribution.

c. The flammable storage cabinet in the paint locker currently is not ventilated there. Vapors from a spill of gas and diesel fuel stored in the cabinet could build-up and reach concentration levels at or above the lower explosive limit (LEL). Under NFPA 30, Flammable and Combustible Liquids Code, flammable storage cabinets are not required to be vented. However, if a spill occurs, vapors generated within the cabinet must have some way of being dispersed. EM 385-1-1 section 09.B.07 states that there shall be "ventilation adequate to prevent the accumulation of flammable vapors to hazardous levels . . . in all areas where flammable and combustible liquids are handled or used."

It is recommended that the flammable storage cabinet be moved from the paint locker into a well ventilated area, such as the warm bay in the utility building.

d. The flammable storage cabinet and metal shelves in the paint locker should be electrically grounded. An electrical wire, that meets all appropriate electrical safety standards, can be attached to the cabinet, metal shelves, and to ground; thereby, minimizing the risk associated with sparks generated by static electricity.

e. Containment of piping to and from the fuel oil storage tanks at the project should be addressed. The installation and use of antisiphon devices for fuel oil piping in the control house is of special concern, since oil from a piping leak could flow into the Little River.

f. Waste oil should only be generated by Buffumville Lake personnel in emergency situations (e.g., emergency oil change on a Corps-owned vehicle or piece of equipment), and taken immediately (within 30 days) to a disposal facility. Waste oil should be in a container that is:

- No larger than 5 gallons in volume
- Compatible with the oil
- Tightly sealed
- Labeled as "WASTE OIL"
- Tightly secured to the vehicle

When taking waste oil for disposal, project personnel must ensure that the facility treating or disposing it is permitted by the Massachusetts DEP to treat or dispose oil. A list of Massachusetts treatment, storage, or disposal facilities is available from DEP by calling (617) 556-1022. Also, project personnel must obtain a receipt from the facility disposing of the oil. The receipt must contain Buffumville Lake's EPA small quantity generator ID number (MA960012567), the amount of waste oil to be treated or disposed, name of the facility accepting the waste oil, method of treatment or disposal, and date of the transport and treatment or disposal of the material. Receipts must be kept on file at Buffumville Lake for at least three years. Massachusetts regulations that apply to the generator of waste oil are found in 310 CMR 30.253, Generator Standards Governing Waste Oil and Used Oil Fuel (A space is left in Appendix N for these regulations).

g. A formal training program should be developed to fulfill the requirements mentioned in paragraph 13 of this plan. A formal program can be developed by Environmental Engineering and Hydraulics Branch, in coordination with the Operations and Technical Support Division.

Appendix P

Glossary

GLOSSARY

Abbreviations:

AST	-Above Ground Storage Tank
CAA	-Clean Air Act
CERCLA	-Comprehensive Environmental Response, Compensation and Liability Act
CFR	-Code of Federal Regulations
CMR	-Code of Massachusetts Regulations
CWA	-Clean Water Act
DEP	-Department of Environmental Protection
EPA	-Environmental Protection Agency
FWPCA	-Federal Water Pollution Control Act
LEL	-Lower Explosive Limit
MA	-Massachusetts
MSDS	-Material Safety Data Sheets
NAPL	-Non-Aqueous Phase Liquid
NED	-New England Division
NFPA	-National Fire Protection Association
NGVD	-National Geodetic Vertical Datum
RC	-Reportable Concentration
RQ	-Reportable Quantity
SCP	-Spill Contingency Plan
SPCCP	-Spill Prevention, Control and Countermeasures Plan
USACE	-U.S. Army Corps of Engineers
UST	-Underground Storage Tank

Terms:

Discharge: A term that includes, but is not limited to, the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of a substance, into or on any land or water, but excludes discharges in compliance with a permit under section 402 of the Federal Water Pollution Control Act. (40 CFR 110.1 & 260.10)

Discharge classification (for oil): The classification of accidental discharges listed below are critical for general response actions. They are not critical for reporting, nor do they imply associated degrees of hazard to the public health or welfare, nor are they measures of environmental damage. However, a discharge that is a substantial threat to the public health or welfare, or results in critical public concern, will be classified as a major discharge. Discharges are quantitatively measured as follows:

a: Minor discharge: A discharge to the inland waters of less than 1,000 gallons of oil, or a discharge of 10,000 gallons of oil to coastal waters.

b: Medium discharge: A discharge of 1,000 to 10,000 gallons of oil to inland waters, or a discharge of 10,000 to 100,000 gallons of oil to coastal waters.

c: Major discharge: A discharge of more than 10,000 gallons of oil to the inland waters, or a discharge of more than 100,000 of oil to the coastal waters.

Environment: Any one of the following: navigable waters, near-shore and open waters and any surface waters, groundwater, drinking water supply, land surface or subsurface area, and ambient air.

Hazardous Substance: For the purpose of this plan, a hazardous substance is any one of the following:

a. Any substance designated pursuant to Section 311 (b) (2) (A) of the CWA.

b. Any element, compound, mixture, solution, or substance designated pursuant to Section 102 or 101(14) of the CERCLA (see Appendix D3)

c: Any hazardous air pollutant under Section 112 of the CAA.

The term does not include (1) petroleum, including crude oil or any fraction thereof, which is not specifically listed or

designated as a hazardous substance in the above definition; or (2) natural gas, natural gas liquids, liquified natural gas, or synthetic gas used for fuel (or mixtures of natural gas and such synthetic gas).

National Geodetic Vertical Datum: Formerly called "Sea Level Datum of 1929," the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, but it does not necessarily represent local mean sea level at any particular place.

Oil: Oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

Reportable Concentration: The threshold (minimum) concentration in soil or groundwater which requires notification to the DEP.

Reportable Quantity: The threshold (minimum) quantity for a CERCLA hazardous substance spill established in Table 302.4 of 40 CFR part 302.

Secondary Containment: Any measure which will retain a spill of the entire contents of the primary container for a sufficient period so that it can be collected or removed without contaminating the environment. Containment must be sufficiently impermeable to contain any spilled material and is normally sized for additional freeboard to allow for precipitation. Any spill that would occur on an impervious surface (e.g. concrete floor or bituminous parking lot) that did not contaminate the environment would be within secondary containment. Secondary containment includes basins, berms, catchment areas, curbing, dikes, drip pans, relief vessels, retaining walls, vaults, and similar devices.

Sheen: An iridescent appearance on the surface of water, normally caused by the presence of oil.

Spill: A generic term which encompasses the accidental or deliberate but unpermitted discharge or release of a pollutant.

Appendix Q

References

REFERENCES

Title 29, CFR, 1994 rev, Part 1910.106; Flammable and Combustable Liquids

Title 29, CFR, 1994 rev, Part 1910.120; Hazardous Waste Operations and Emergency Response

Title 40, CFR, 1994 rev, Part 110; Discharge of Oil

Title 40, CFR, 1994 rev, Part 112; Oil Pollution Prevention

Title 40, CFR, 1994 rev, Part 114; Civil Penalties for Violation of Oil Pollution Prevention Regulations

Title 40, CFR, 1994 rev, Part 116; Designation of Hazardous Substances

Title 40, CFR, 1994 rev, Part 117; Determination of Reportable Quantities for Hazardous Substances

Title 40, CFR, 1994 rev, Part 300; National Oil and Hazardous Substances Pollution Contingency Plan

Title 40, CFR, 1994 rev, Part 302; Designation, Reportable Quantities, and Notification

Title 40, CFR, 1994 rev, Part 355; Emergency Planning and Notification

Title 310, CMR, 1995 rev, Part 30.253; Generator Standards Governing Waste Oil and Used Oil Fuel

Title 310, CMR, 1995 rev, Part 40; Hazardous Waste Regulations

EM 385-1-1, October 1992, Safety and Health Requirements Manual

ER 500-1-1, March 1991, Chapter 11; National Oil and Hazardous Substance Pollution Contingency Plan

ER 1130-2-434, July 1985, Response to Oil and Hazardous Substance Incidents

USACE Operated Facilities Environmental Compliance Guidance Letter No. 2, Spill Planning and Response Requirements

NFPA 30, 1990 Edition, Flammable and Combustible Liquids Code

Appendix R

Amendments/Changes to SPCCP/SCP

Appendix S

EPA Approval Letter

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ENVIRONMENTAL SERVICES DIVISION
60 WESTVIEW STREET, LEXINGTON, MASSACHUSETTS 02173-3185

28 June 1995

Col. Earle Richardson, USA
Commanding Officer
New England Division, Corps of Engineers
Department of the Army
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Attention: Dr. Ian T. Osgerby, PHD, PE

Re: Review Comments regarding:
Spill Prevention Control and Countermeasures (SPCC) Plan
and Spill Contingency Plan for Buffumsville Lake

Dear Colonel Richardson:

As the senior On-Scene Coordinator (OSC), supervising the Oil Pollution Prevention Program, and an oil and chemical spill responder, I was assigned to review the referenced document. I wish to commend your staff, to you, for the clear and comprehensive manner in which they approached spill prevention and contingency planning for the Buffumsville Lake Flood Control Project area.

As I have discussed, with Dr. Osgerby, my comments do not require a substantive change in the SPCC Plan, but may help assure that the Plan is protective of the facility. the comments are:

1. Engineer's Certification Page; Under the signature and date, lines should be provided for the PE's license number and State of registration.

2. Page 16, item d.(3), Notification; The Massachusetts Dept. of Environmental Protection phone number is only available during normal working hours. During Non-working Hours, notifications are to be made to the State Police dispatcher, in Framingham, [(508) 820-2121]. This number should be added to the Plan.

3. Page 17, First Paragraph; An excellent statement is made, concerning the importance of reporting spills to the National Response Center "...regardless of the size of the incident."

However, the statement might be missed if the spill reporter, in the heat of the moment, read the Massachusetts reportable quantity of 10 gallons, as noted in Appendices D1 and D2.

A note in the Appendices, indicating that the Federal Reportable quantity for an oil spill is a "sheen", would be useful.

4. Appendix E1, Emergency Spill Response Equipment and Materials; Two items need clarification. they are Boom and Pig. Boom is a term used to describe a synthetic barrier used to contain oil on water. It can come in 50' lengths, however one length is of little value. It is too short to act as much of a barrier, and if there is any current, one length will not allow for deployment of several overlapping barriers to slow oil movement. Finally, most containment booming requires several people, boats, and possibly an anchoring capability in order to be useful. Consequently, containment boom may not be of great use as part of the response equipment.

Pig is usually used to refer to a sorbent cylinder, which floats, may be linked to form a barrier, is portable, and easily installed. These will be very useful, on land, or in the water. the Plan appears to have sufficient for an initial response. This is especially true, when added to a bale of sorbent pads, as indicated in the Plan.

The Drain blocker, or drain covers, are extremely useful, they should, however, be able to overlap a drain by 6 inches per side (18" by 18" may be somewhat small). In most cases, it is useful to have some additional weighty material (like sand) to hold the cover down.

In addition to the materials listed on Page E1-1, I would suggest 1, or 2, open top drums, in order to store contaminated sorbents, so that weather conditions will not allow oil to leach out prior to disposal.

5. Appendix G, Spill Discovery Checklist; It might be easier for spill reporting personnel if the phone numbers for calls were on the form, by the Agency being called.

I hope that my comments are of use to you and your staff. If I can assist you further, please do not hesitate to call me at (617) 860-4362.

Sincerely,

David W. Tordoff, OSC
Emergency Response Section

BUFFUMVILLE LAKE DAM LAYOUT

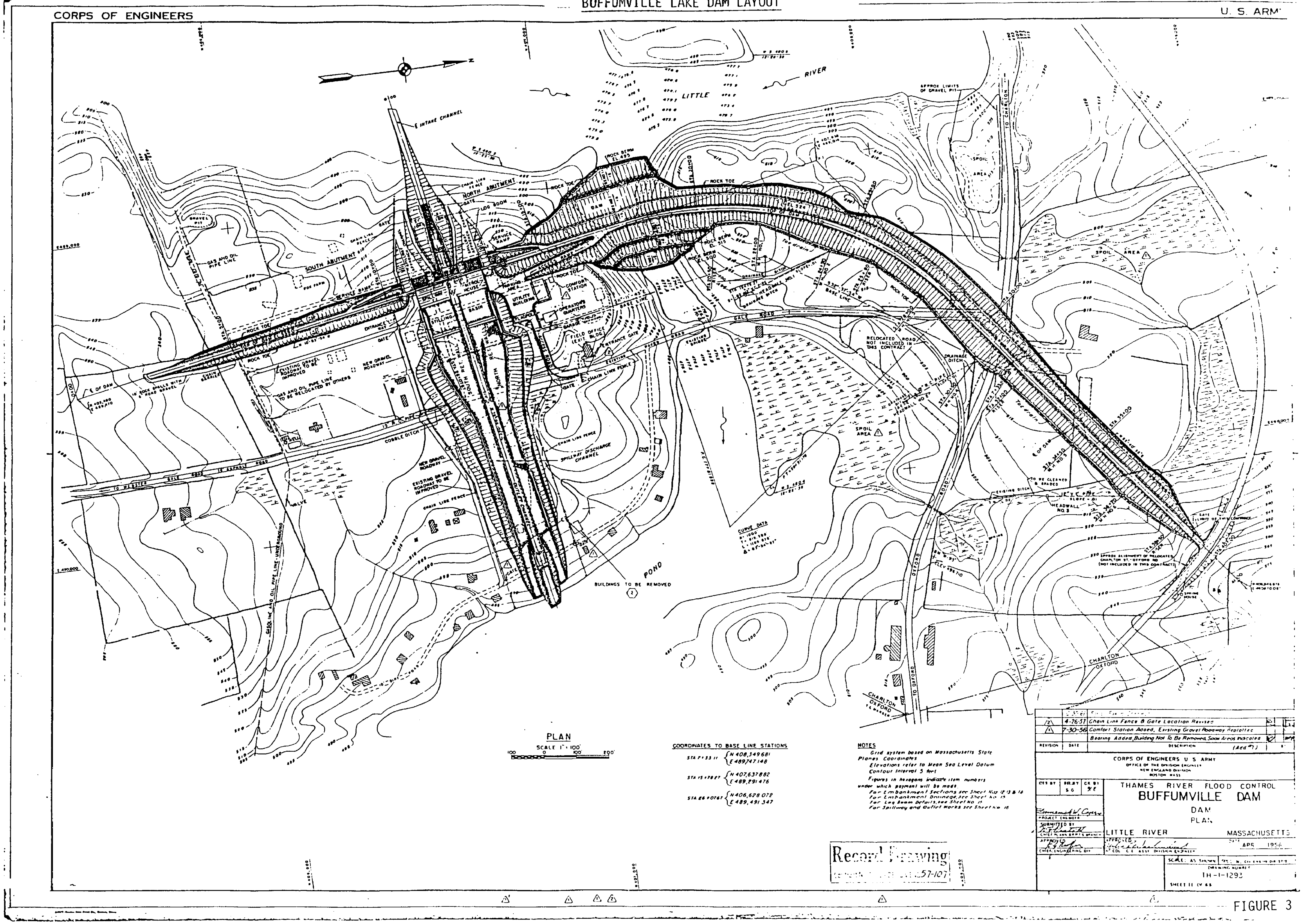


FIGURE 3

BUFFUMVILLE LAKE RESERVOIR MAP

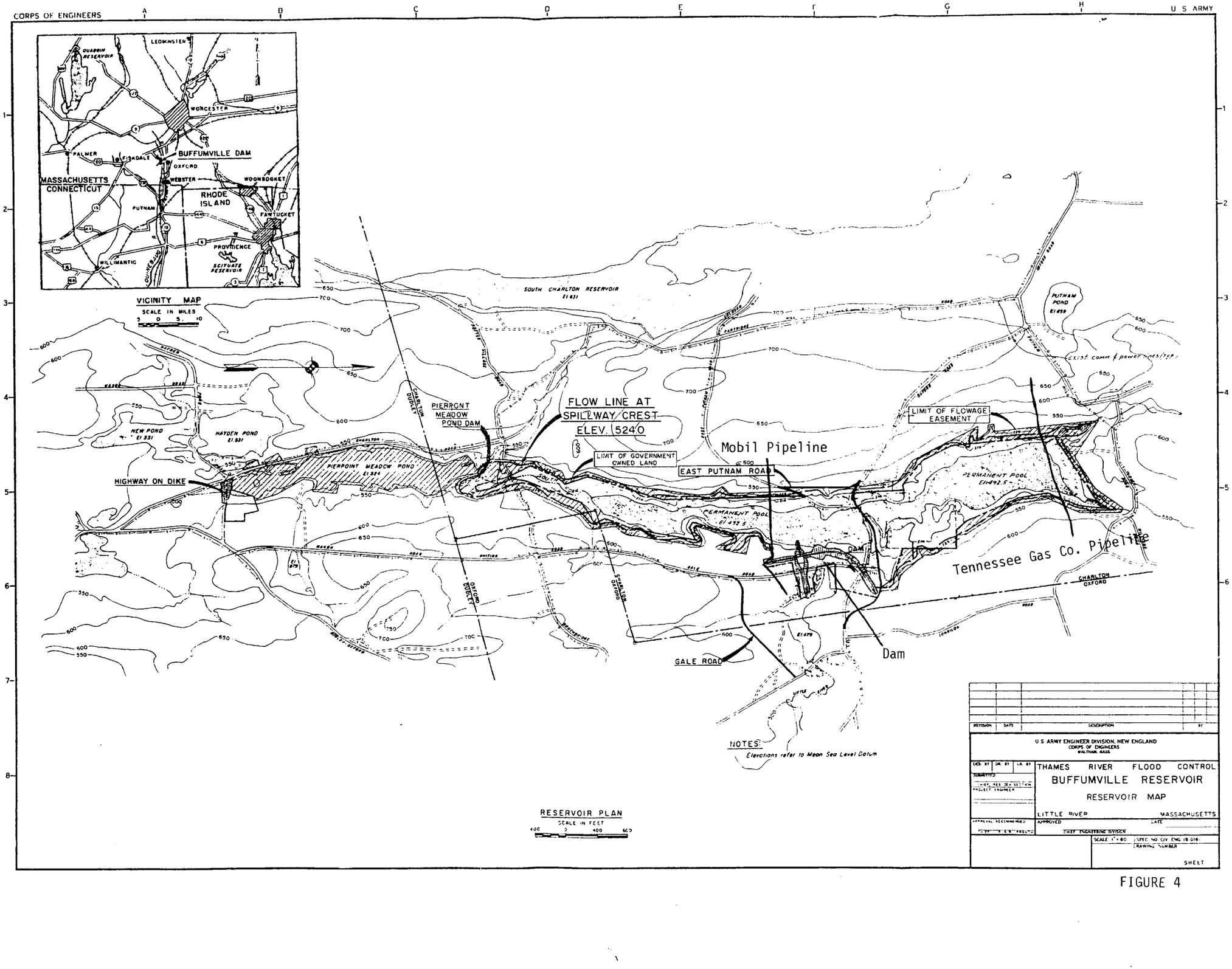


FIGURE 4